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Journal of the Society of Arts.

FRIDAY, JUNE 11, 1869.

Announcements by the Council.

INDIA COMMITTEE.

On Friday evening, June 18th, the seventh conference will be held, when the subject of "Cotton Cultivation and Supply" will be discussed. The chair will be taken at 8 o'clock. Members of the Society interested in Indian questions are invited to attend.

CONVERSAZIONE.

The Conversazione originally fixed for the 23rd inst. is unavoidably postponed to a later date, which will be announced as soon as the arrangements are completed.

ANNUAL CONFERENCE.

The Eighteenth Annual Conference between the Council of the Society and the Representatives of the Institutions in Union and Local Boards will be held on Wednesday, the 23rd inst., at Twelve o'clock, noon. The Chairman of the Council will preside.

The Council will lay before the Conference the Secretary's Report of the Proceedings of the Union for the past year, and the results of the Examinations; and the Programme of Examinations for 1870 will also be brought before the Conference.

The following suggestions of subjects for discussion have been received from various quarters, it being understood that in putting them forward the Council express no opinion whatever upon them:—

1. What arrangements can Mechanics' Institutions make for promoting the systematic Technical Education of the people in their several localities, either by the establishment of trade schools or otherwise?
2. It being in contemplation to call meetings of the members of the Society of Arts and others in corporate towns, for the furtherance of Technical Education, how far can the Institutions in Union with the Society aid in promoting the success of such meetings?
3. Does the Endowed Schools Bill, now before Parliament, afford any facilities which can be taken advantage of by Mechanics' Institutions for such purposes, and if not, can any steps be taken for obtaining the insertion of clauses with that object in view?
4. In what way can the advantages of union with the Society of Arts, apart from the Examinations, be made available in the provinces?
5. How can the Society of Arts assist in obtaining the extension of State aid to Night Classes in the Institutions in Union?
6. Do the Examinations in the subjects of Science and Art, carried on by the Department of Science and Art, render unnecessary those of the Society of Arts in the like subjects?

7. Would the extension of the Final Examinations to Middle-class Schools produce beneficial results?

8. Is it not desirable that scholars in attendance at Day Schools should be excluded from the Elementary Examinations?

Secretaries of Institutions and Local Boards are requested to send, *immediately*, the names of the Representatives appointed to attend the Conference; and early notice should be given of any other subjects which Institutions or Local Boards may desire their Representatives to introduce to the notice of the Conference.

Secretaries of Institutions are requested to forward *at once*, by book post, copies of the last Annual Reports of their Institutions.

ALBERT MEDAL.

The Council have this year awarded the Albert Gold Medal to Baron Justus von Liebig, Associate of the Institute of France, Foreign Member of the Royal Society, Chevalier of the Legion of Honour, &c., "for his numerous valuable researches and writings, which have contributed most importantly to the development of food-economy and agriculture, to the advancement of chemical science, and to the benefits derived from that science by Arts, Manufactures, and Commerce."

This medal was instituted to reward "distinguished merit in promoting Arts, Manufactures, or Commerce," and has been awarded in previous years as follows:—

In 1864, to Sir Rowland Hill, K.C.B., "for his great services to Arts, Manufactures, and Commerce in the creation of the penny postage, and for his other reforms in the postal system of this country, the benefits of which have, however, not been confined to this country, but have extended over the civilised world."

In 1865, to his Imperial Majesty the Emperor of the French, "for distinguished merit in promoting, in many ways, by his personal exertions, the international progress of Arts, Manufactures, and Commerce, the proofs of which are afforded by his judicious patronage of Art, his enlightened commercial policy, and especially by the abolition of passports in favour of British subjects."

In 1866, to Professor Faraday, D.C.L., F.R.S., for "discoveries in electricity, magnetism, and chemistry, which, in their relation to the industries of the world, have so largely promoted Arts, Manufactures, and Commerce."

In 1867, to Mr. W. Fothergill Cooke and Professor Charles Wheatstone, F.R.S., in recognition of their joint labours in establishing the first electric telegraph.

In 1868, to Mr. Joseph Whitworth, F.R.S., LL.D., "for the invention and manufacture of instruments of measurement and uniform standards, by which the production of machinery has been brought to a degree of perfection hitherto un-

approached, to the great advancement of Arts, Manufactures, and Commerce."

PRIMARY EDUCATION.

The Council have resolved to invite the Trade Societies of the United Kingdom and others to send Artisan Representatives to a Conference, to be held in July, for the purpose of extending Primary Education on the half-time system to all children under ten years of age, and to consider what proportion of the necessary cost should be borne by parents and by the State.

ADDRESS TO THE VICEROY OF EGYPT.

The Council have decided to invite His Highness Ismail Pasha, Viceroy of Egypt, to receive an address from the Society for the Encouragement of Arts, Manufactures, and Commerce, in acknowledgment of the exertions of His Highness and his predecessors for promoting intercourse with India, for supporting the Suez Canal, for the extension of railways, for the improvement of cotton culture, and for the introduction of machinery for irrigation, the sugar manufacture, and the preparation of cotton.

MEMBERS PROPOSED.

The following additional candidates have been proposed for election as Members of the Society, and will be balloted for at a special meeting, to be held after the Annual General Meeting, on the 30th inst. :—

Earle, Thomas, 1, Vincent-street, Ovington-square, S.W.
Galloway, Rev. William Brown, M.A., 1, Fitzroy-road, Primrose-hill, N.W.

Laing, George E., 1, Raymond-buildings, W.C.

Lamb, Robert, 56, Richmond-road, Barnsbury, N.

Langley, J. Baxter, 50, Lincoln's-inn-fields, W.C.

Lansdowne, George, 2 and 3, Warwick-street, Charing-cross, S.W.

Warren, Reginald A., 99, Great Russell-street, W.C., and Preston-place, near Arundel.

Worley, Joshua, 6, Brabant-court, Philpot-lane, E.C.

SUBSCRIPTIONS.

The Lady-day subscriptions are due, and should be forwarded by cheque or Post-office order, crossed "Coutts and Co.," and made payable to Mr. Samuel Thomas Davenport, Financial Officer.

Proceedings of the Society.

INDIA COMMITTEE.

The sixth conference was held on Friday, May 28th, Lord WILLIAM HAY in the chair. The papers read were, on "Trade between Calcutta, Darjeeling, Bhootan, and Thibet," by Dr. ARCHIBALD CAMPBELL, late Superintendent of Darjeeling; and on "Trade between Assam, Thibet, and Western China," by Col. HOPKINSON, Commissioner of Assam.

ON TRADE BETWEEN CALCUTTA, DARJEELING, BHOOTAN, AND THIBET.

By Dr. A. CAMPBELL.

Before reading my paper, I shall allude to some circumstances which have an important bearing on the subject and which are not, I think, generally familiar to people in England.

A trade between India and Thibet always went through Nepaul and Bhootan, but after the present Goorkha dynasty conquered the valley of Nepaul, the trade which had been well carried on by the Newars, whom the Goorkhas displaced, became much reduced, and it then went chiefly through Bhootan. The Thibetans were always favourable to trade with India, and had a trading establishment near Calcutta. The Grand Lama was so desirous to improve this trade, that he asked the Governor-General of India to send an envoy to him for the purpose, and this led to Bogle's mission, in 1774, and to Turner's, in 1783. Shortly after this, however, the Chinese became paramount in Thibet, but their exclusive system and the normal misrule in Bhootan destroyed the trade, or nearly so.

In more recent times the trade again reverted to Nepaul, and we have opened a way for it through Darjeeling. We have also, with other nations, opened trading ports in China itself; and the supremacy of China has been thrown off by the Pauthays in the south-west, and by the Mahommedans in the extreme north-west of the empire. If the Thibetans follow suit—which is not unlikely—their tolerant usages will probably resume their sway, and we may look for many trading facilities from them. In the meantime there is a good occasion for trying to induce the Chinese government at Peking to relieve the trade with Thibet from all obstacles and restrictions in that country.

In venturing to bring this portion of our conference before you, I must at once announce that I have not the means of showing that an extensive or flourishing commerce is in existence in this direction, or that such can be easily or at an early date realised. My aim is to draw attention to the subject, to indicate the state of things which obstruct the development of trade, and to point out how these may be most easily obviated. In doing so, I shall endeavour to give the information as concisely as possible, to meet the demands on our time this evening, and to furnish some details.

Our subjects are, trade with Central Asia, Thibet, and South-Western China. As the first is almost entirely carried on from the north-west provinces of India, with Bombay as the seaport for English exports, it is quite distinct from the second, which is carried on from Bengal, with Calcutta as the seaport. It is not, however, so distinct from the third division of our subject, as trade with Thibet has the ultimate object of being trade with South-Western China also, although the routes from India lie through very different countries. Thus, goods reaching Lassa, the capital of Thibet, through Nepaul or Darjeeling, go on to Siling and Sechuen, Chinese marts; goods from Rangoon, through Upper Burmah and Bhamoo, being destined, according to Mr. Cooper's recent account of his unsuccessful effort to reach India from the Yangz-tekiang, to reach the province of Sechuen also, and thus the two streams of commerce will meet in China. Taking trade between India and Thibet in its fullest sense, then, it also means trade between the rich and populous countries of India and China by overland routes. Thibet must be considered, to some extent, as a medium of passing the commerce between these two great and populous countries. A trade with Thibet only would be, comparatively speaking, a restricted one, as silks, satins, fine woollen fabrics, &c., come from China. Although Thibet is a country of immense extent, and has very valuable products in gold, the finest wools, musk, borax, &c., its population is not dense, and Lassa itself, although a great entrepôt for trade, is not a great manufacturing city.

Looking at the map before you, then, you see the plains of Bengal on the south, and the country of Thibet on the north, with the great chain of the Himalayas lying between them. Taking Bengal geographically for my present purpose, it includes the provinces of Oude, Goruckpoor, Tirhoot, Purnea, Darjeeling, Rungpoor, and the valley of Assam. The corresponding portion of the Himalaya includes the independent state of Nepal, the small protected territory of Sikhim, and the hill country of Bhootan.

Our frontier with Nepal, from the Kali river on the west, to the Mechi river on the east, is 500 miles, with Sikhim and Bhootan, about 250 more. The breadth of the chain is at least 100 miles. In no part of this long line of frontier—750 miles north of Nepal, Sikhim, and Bhootan—have we any direct access into Thibet, nor have we any political relations whatever with the government of the country. It will therefore be readily admitted, after this outline of the relative positions of the two countries, India and Thibet, that there must be many obstacles to the carrying on of trade between them, and at present it is so. The obstacles are of two kinds, physical and political. The first lie in the character of the mountains, which, in the position indicated, form an aggregate of the highest peaks in the world, with innumerable lofty spurs and ranges, the whole embracing elevations from 29,000 feet downwards. The mean elevation of this extensive barrier, for such it may be called at present, is not easily computed, nor would it be of much importance to state it. The great facts, however, remain, that there is not one road through the Himalayas, except for carriage on men's backs, and that the passes leading into Thibet are all above 14,000 feet above the level of the sea, that these elevations involve the closing of the routes by snow for many months of the year, that the mean elevation of the route in Thibet is not under 14,000 feet, and that the lowest point on the road to Lassa, the terminus in Thibet, is 11,000 feet, which gives an inclement climate for many months of the year; added to this, the route in Thibet, although admitting of carriage on ponies and mules, and easy compared with the passage of the Himalaya, passes over Kambala and other ranges, the elevation of which involve heavy snow-falls and great cold.

The following are the elevations of the passes into Thibet from Nepal:—The Kiroong I reckon to be 14,000 feet. I have not the exact elevation given by the pundit Numphal, who crossed it on his journey to Lassa, published last year, but the monastery of Tadum, close by, on the Thibetan plateau, is 14,200; Kooti, also a pass from Nepal, say 14,000; Walloongchoong, from eastern Nepal, measured by Dr. Hooker, is 16,764; from Sikhim, the Kangra Lama pass is 15,600; Donkia, 18,500; Tunkra, 16,000; and Chola, 14,000, all given by Dr. Hooker. Phari, the principal pass from the western parts of Bhootan, I reckon to be about 14,000 feet. Of the passes from Bhootan, east of Phari, I have no information.

The political obstacles arise from the character of the governments in the Himalaya and in Thibet itself. In Nepal, through which the greater part of the trade runs at present, the government is very exclusive. No European, except those belonging to the political residency, is allowed to reside there, and the residency officers are not allowed to travel in the country more than a few miles from Cathmandoo, the capital. There are many restrictions on free trade in the form of customs and transit duties, government and official monopolies, and the entire want of anything like a road from the British frontier to the capital, or beyond it to the Thibetan frontier, and this is after an alliance with Nepal of more than 50 years. All natives of India, however, whether our immediate subjects or belonging to native states, have free access to Nepal. This rather invidious distinction between natives of India and Europeans does not prevent the Nepaulese of all ranks and classes from deriving the fullest advantage from

free resort into our provinces, where they are welcome to trade and settle without any restrictions.

The next obstacles of a political nature with which the trade to Thibet had long to contend, were in Sikhim. In consequence of a monopoly of the trade with Thibet being in the hands of the Dewan, and actual ruler of the country, who did not scruple to use his full power for his individual benefit, the trade through other hands was prevented, and it was almost annihilated in his own. After long continued and strenuous efforts directed to their removal, and in the end the expulsion from Sikhim of the obnoxious individual, they are nearly or quite removed. All this has followed our settlement at Darjeeling, and it is from this place, as shall be presently shown, that we have it most in our power to diminish the obstacles, and that we must look for the greatest development of a trade with Thibet.

In Bhootan, ever since our first political relations with it in 1774, it has been altogether hopeless and impossible to make it the medium of a trade with Thibet. Turner's mission to the Grand Lama, in 1783, failed to effect this object; so did Pemberton's mission to Bhootan, in 1838, and Eden's, in 1864. Since then, however, we have annexed the Dooars and lower hills of Bhootan, and although there is still a government, or, more correctly speaking, a system of the greatest mismanagement and lawlessness that ever existed anywhere, in possession of the portion of Bhootan giving access to Thibet, for the people's sake, it is to be hoped that our nearer contact with the Bhootanese, since the annexation of the Dooars, or some fortunate necessity for extending our frontier to the Thibet border may occur, to enable us to clear all political obstacles in this quarter.

I shall now proceed to give the most reliable information I have of the actual state and extent of the trade with Thibet.

For the Nepal portion I am indebted to a paper by Mr. Brian Hodgson, who was long our distinguished Resident in that country. It was written in 1831, and is published in No. 27 of the "Selections by the Government of Bengal," for 1858. Mr. Hodgson invited the attention of the merchants of Calcutta and Bengal to the high profits then ruling in Nepal, where 100 per cent. on prime cost in Calcutta or Benares was very common, and 30 to 40 per cent. was the ordinary rate of profits; and he gives tables, showing the imports and exports, rates of duties, profits, and much other information on the trade with Thibet, and with Nepal itself, from which the former is scarcely separable. The following is an abstract of this important paper:—

"Goods from India, whether the produce of Europe or India, pay about 12 annas, or 1s. 6d., per package of 96 lbs., as transit duty, and this franks them to the Thibet frontier.

"All goods into and through Nepal are carried on men's backs.

"Imports from Thibet into Nepal pay no duty, except musk and gold.

"All the silver from Thibet must be taken to the Nepal mint, where it is purchased.

"The trade with Thibet is carried on principally by Cashmeres, who have houses at Dacca, Patna, Cathmandoo, and Lassa.

"Imports from India into Nepal, in 1831, estimated prime cost, 17½ lacs of rupees, or £175,000; 157 articles enumerated. Of this amount, on 57 articles, it was estimated that about three lacs, or £30,000 worth, went on to Thibet.

"The exports of Nepaulese and Thibetan goods to the plains in 90 articles enumerated, estimated value 11 lacs, or £110,000, of which two-thirds, or £65,000, are on account of imports from Thibet into Nepal. The trade with Nepal is carried on principally by merchants of Benares, who have 10 kothees or firms at Cathmandoo.

"Transit duties levied on goods from the Nepal frontier to Cathmandoo, about 7 rupees, or 14s., per bullock load of 380 lbs., or 3s. 6d. per man's load of 160 lbs.

"An *ad valorem* duty of $3\frac{1}{2}$ per cent. is levied on arrival at Catmandoo. The valuation is made by government officers. If it is objected to by the merchant, the government requires a sale to itself at the merchant's valuation.

"An export duty of over $4\frac{1}{2}$ per cent. is levied on all articles, whether of Nepal, Thibet, or China."

The following is a list of the principal imports into Nepal:—European broad cloths and other woollens of all sorts; European chintzes and other cotton of all sorts; European silks of all sorts; European linens of all sorts; Amritsir and Cashmere shawls, good Dacca muslins, and Jamdanees' sahnas, &c.; Malda and Bhaugulpoor silk and mixed silk and cotton stuffs; Benares' kimkhabs, toftas, mushroos, shamlas, dopattahs, &c.; Mirzapoor and Calpee kharwas and garbas, mowsahans, andarsahs, &c.; Behar pagrees, khasas, &c.; Bareilly, Lucknow, and Tunda chintzes; European cutlery, as knives, scissors, &c.; European glass ware, as chandeliers, wall-shades, &c.; European mirrors, window glass, &c.; Indian kiranas, or groceries, drugs, dyes, and spicery of all sorts; peltry of Europe and India, as Dacca and other skins, goat ditto, &c.; quicksilver, vermilion, red and white lead, brimstone, jasta, ranga, camphor, indigo; precious stones, as diamond, emerald, pearls, coral; Indian laces, as *kālābuttu*, *gotah*, &c."

The following is a list of the principal exports from Nepal:—Chours or yak tails; Thibetan, Himalayan, and Chinese woollens, as maleeda, toos, namda, chourpat, rahry, bhot, &c.; Chinese damasked and brocaded satins and silks; sohāga or borax; Nepaulese, Bhoota, and Chinese drugs; rhubarb, nihargiyah, zaharmohara, momira, jatamangsie, hurtal, &c.; Bhoota and Nepaulese paper, musk pods, gold, silver, rupees of the plains, rupees of Nepal, and copper pice of ditto, ponies, or tanghans; hardware, as iron powrahhs, &c., &c."

The chief exports to Thibet are European broad cloths (crimson, green, orange, liver, and brown are preferred), cutlery, pearls, coral, diamonds, emeralds, indigo, and opium.

The chief imports from Thibet are, Chours or yak tails, white; ditto, black; Chinese velvets, satins, silk thread, and raw silk; peltry of Mongolia and Bhote, as samoor, kakoon, chuah-khal, garbsooth, &c., borax, and furs; Chinese and Bhotea tea, drugs."

From Calcutta, Patna, and Benares the routes meet at Sugowlie, on the frontier of Champarun, whence it is ten stages to Catmandoo. There are two routes from Catmandoo, the capital of Nepal, to the frontier of Thibet, one by Koote, the other by Kiroong. The former runs from the east end of the valley of Nepal, the latter from the western. Both places are eight stages from Catmandoo. From these places it is about a month's journey to Lassa, and the hire of a pony or mule is about ten rupees, or £1.

From Mr. Hodgson's tables, I reckon the total annual trade between India and Nepal, including Thibet, to amount to about £285,000. It has probably increased since his time, but of this I have no authentic information.

I now come to Darjeeling as the next route for trade with Thibet. This place being a British possession in the Himalaya, it differs in every respect from Nepal, as holding out superior advantages for a greatly-extended trade with Lassa. It is under 400 miles from Calcutta, of which 200 has a railway, and although a rail is much wanted for the remainder of the distance, it has, in the meantime, a good cart-road from the foot of the hills to the station, 30 miles; whereas Catmandoo is more than 600 miles distant from Calcutta, with no road at all in the hills. Darjeeling is the shortest route from Bengal to Lassa, the distance being say 500 miles, of which we have now the control of 70 miles through Sikhim to Choombi, and over which we can, under treaty with the Sikhim Rajah, make a road whenever we wish.

The present trade with Thibet through Darjeeling, as in Nepal, cannot well be separated from the trade of

Darjeeling itself. Of the present amount of this trade I have not correct information. In 1854, the imports into Darjeeling from the plains were estimated at three lacs of rupees, or £30,000; from Thibet, in 1861, at 70,000 rupees. The principal export from Darjeeling to the plains is tea, of which about 1,500,000 lbs. is expected this season, which may be valued at £100,000. The principal exports to Thibet are, English broadcloths (brown, purple, orange, green, and yellow, the most preferred), cutlery, indigo, tobacco, sugar, rice, cotton sheetings, endy (or castor-oil) silk, crockery, &c. Wool is a very important product of Thibet, and may be looked to as a valuable export. In that country and the adjoining ones there are immense tracts of pasture land, on which flocks of sheep, in almost countless numbers, are maintained. Seven or eight thousand sheep is a common number for even ordinary graziers to possess.

The great elevation and cold temperature of these countries, with the fine pasture, produce very heavy fleeces of the finest wool, and of a very long staple, quite as fine as the Australian wools, but more valuable for many fabrics, on account of its longer staple.

While at Darjeeling I procured some loads of this wool, and sent samples of it, with rate of cost, for trial and export to Calcutta and elsewhere. It was highly spoken of; and the industrial school at Jubbulpore, in the Central Province of India, celebrated for its fine carpets, was so pleased with it, that the managers offered to send me a lac of rupees (£10,000), to be laid out in purchasing wool for them, at the rates I had quoted. I need scarcely say it was not procurable; but the wool is, in Thibet, in immense quantity.

Of the state of trade at this moment through Bhootan I cannot speak. It was, as regards English and Indian goods, at a complete stand-still all my time (from 1839 to 1861). Captain Pemberton, in his report (1838) says:—"There was every reason to believe that the trade which formerly existed between Bengal and Thibet was at one time carried on through Bhootan, and to its total cessation may, in a great degree, be attributed the marked deterioration of the latter country."

The following is a list of the principal articles imported from and exported to Bhootan. The former amounts to 7,375 rupees, or £737 only, the latter to 4,150 rupees, or £415. Imports:—Debang (China silks), cow-tails, hill ponies, wax, walnuts, musk, lac, madder or munjeet, blankets, silver. Exports:—Indigo, cloves, nutmeg, cardamum, nukher, camphor, sugar, copper, broad-cloth, goat-skins, endy-cloth (castor-oil silk), coarse ditto, googool, sandal-wood, country gunpowder, dried fish, tobacco.

Of the city of Lassa, as the focus of all Thibetan trade, there is, as you are all aware, not much known as the result of European observation on the spot, nor can I give you positive information as to the profits to be made there on English and Indian goods. From all I learned at Darjeeling, they are very large, and as goods in transit, loaded with a profit of 30 or 40 per cent. in Nepal, are still profitable at Lassa, it is quite clear that goods going direct through Darjeeling to Lassa, without any custom or transit duties, as in Nepal, and not having Nepal profits added to the prime cost, must be very profitable indeed.

At Lassa, the trade arrangements are on a good footing, according to my information. It is resorted to by people of many different nations from every direction, and the merchants of each country appoint their own chief or consul, who is the medium of communication with the local government, and has the power of settling all disputes among his countrymen without reference to his own or the Thibetan government. The Newars of Nepal, the Cashmerees of Patna and Dacca, the Bhootanese, the Ladakees, as well as the merchants of many countries lying between Thibet and China, have consuls of this description. The last account of trade at Lassa by a traveller, is by Nunphal Pundit, of the Indian Trigonometrical Survey. He says:—

"During the month of December, merchants from all parts bring their merchandise here from China, Tartary, Darchando, Chando, Khan, Tawang, Bhootan, Sikhim, Nepaul, Darjeeling, Patna, and Ladák. From China, silks of all varieties, carpets, and chinaware. From Jiling, in Tartary, is brought gold-lace, silks, precious gems, carpets of a superior manufacture, horse-saddles, and a very large kind of dumb, or large-tailed sheep, also valuable horses. From Darchando immense quantities of tea (Darchando is said to be situated north-east of Lassa, and to be distant two months' journey). From Chando city, in the Kham territory, an enormous quantity of the musk perfume is brought, which eventually finds its way to Europe, through Nepaul. Rice and other grain that is foreign to Lassa, is brought from Tawang, in Bhootan. From Sikhim, rice and tobacco; and from Nepaul, Darjeeling, and Patna, broad-cloth, silks, satins, saddles, precious stones, coral, pearls, sugar, spices, and a variety of Indian commodities; charas and saffron come from Ladák and Cashmere."

I have now to conclude with a few observations on the best means of improving and greatly extending this trade, and they are suggested by what has gone before. Our great aim should be to clear the way of all obstacles from our own to the Thibetan frontier, and it may be done in this way:—Firstly, we require a new commercial treaty with Nepaul, stipulating for the abolition of all transit and customs duties on European and Indian goods, whether for Nepaul or Thibet, and for the removal of all official interference with the trade between the British frontier and the frontier of Thibet. I have no hope that we can at present induce the government to make a road to Catmandoo and onwards to the passes, but it may be hoped for some day, and the treaty is feasible. Secondly, we should take advantage of our present close connection with Bhootan, to remove all obstructions to trade between the Dooars and the Thibetan frontier. I am, however, one of those who think that it would have been the best thing possible for the people of that country, if the British Government had annexed the whole of it, instead of the Dooars only. This would have effectually cleared the way for trade to the north, and put a stop for the future to Bhootanese kidnapping of our subjects, and violent breaches of frontier, which the partial annexation will not effect. Thirdly and lastly, we should direct our best attention to the route by Darjeeling as the shortest and best to Thibet. There is not very much left to be done now to secure the benefits of that route, if the government would take it up in earnest. There are many other considerations connected with Darjeeling which could be fulfilled at the same time, and it would be wise and beneficent to attend to them. What is wanted is the extension of the railway to the foot of the hills, a road from Darjeeling for foot travellers and ponies, with rope or iron suspension bridges over the Rungeet and Teesta rivers to the Thibetan frontier at Chola, and the establishing of an annual fair or bazaar, to continue for two months in the spring, at some place in Sikhim, near the frontier, to enable the Thibetans, who might not desire to go on to Darjeeling, to dispose of their goods, and provide themselves with return investments. After these arrangements are completed, I do not see why we should not go further a-head to develop our commerce with Thibet, and arrange to have a British consulate at Lassa. Russian goods are to be found in the bazaar at Lassa, and the Russians are fond of following their wares in this direction; our English and Indian goods are in great request there, and we may as well follow them also. This, however, is a matter which, you will probably agree with me, requires much consideration and discussion.

ON TRADE BETWEEN ASSAM, THIBET, AND WESTERN CHINA.

By COLONEL HOPKINSON.

I think it by no means improbable that the practicability of a communication between Western China and

Assam will be some day established. Such a probability has indeed been assumed from the fact only of the proximity of the north-eastern corner of Assam, on the left bank of the Brahmapootra (so far as the mere distance in miles measured on the map goes), to Yunan, in China, and supposes that the mountainous region which intervenes may not be found on close examination so impracticable as all inquiry, and, indeed, experience has hitherto led us to believe it to be. Mr. R. D. Mangles, in some observations on this point, certainly speculates "on a tract not known, at least, to present any special difficulties," but all the routes that have been explored or inquired into, as those by Wilcox, Burnett, Hannay, White, and, if I mistake not, Bayfield, appear to be crowded with every species of obstruction that can be imagined, to impede and prevent commercial intercourse.

If we accept the importance which has been insisted on, of so directing the course of any exploration that it should keep clear of tribes dependent directly or indirectly on the Burmese government, we must at the same time adhere strongly to the opinion that no practicable route is likely to be found, except through Burmese territory, and one, moreover, that will not bring the explorers among tribes very directly under the influence of the Burmese government.

Lieut. Wilcox's adventurous journey illustrates the difficulties of any line passing through the Burmese tribes, and these were met with, not because he started from Suddya, since there is a very good line from Suddya to Beesa, and thence to Moursing, but because he attempted to proceed east, and then north-east, after leaving Suddya, and he had hardly quitted Assam than he found himself in the region of perpetual snow. On a clear day, snowy ranges can be seen from Suddya bounding the whole horizon from north to south-east. My idea of this region is, that it is filled by the convolutions of a mighty knot, uniting vast mountain ranges which radiate from it in every direction, and amid the intricacies of which I should despair of finding a way either in or out.

There is no doubt that it was by the pass that derives its name from the Patkoe hill, over which it leads, that Assam was originally invaded, and as every successive wave of conquest or immigration has followed the same channel, I think it may be inferred that the Patkoe pass is, in fact, the only route that presents any facilities for transit.

The journey from the foot of the Patkoe mountain to Kookoong or Mangkhwon may be accomplished in seven marches, of which only one, the first, is said to be long and difficult; and between Mangkhwon and Moganny there are said to be only eight marches, through a very fine and thickly inhabited country; and again, from Moganny to Santa Fou, in Yunan, there is a direct road.

From what I know of the relations subsisting between the various tribes of Singphos and Kampteas, I think the supposition a mistaken one that has been made by some explorers, Mr. Goodenough for instance, that the influence of the Singphos on our side over those in the Hookeong valley can be other than extremely limited, possibly—even probably—the fact may be that it is altogether non-existent.

I believe, however, that, on the other hand, the power of the court of Ava, in the valley of Hookeong, and the parts adjacent, has been greatly underrated. I have seen a report concerning the detention of one of our chiefs in the Hookeong valley, which goes to show that there is at this time a Burmese governor, called the Woonpoong Monng-tha, acting as governor of Mangkhwon, and that the Singphos of Hookeong are wont to look at the Burmese government at Mondelay for protection against the arbitrary conduct of their own chiefs.

I should doubt whether any exploring party engaged up to lat. 27°, or even further north, could prosecute their object without the unreserved and cordial assistance of the Burmese government.

I should be sorry to be thought to express myself dogmatically against the practicability of establishing

trade communication between China and Assam, through the tract under consideration, for the information we have about it is too small to warrant a positive opinion one way or the other, but even going no further than the map tells us of the position of the Irrawady, I cannot understand how any land route which comes within any distance so near it as to be put into competition with it, should be preferred to it, nor what could be the description of merchandise that it would be more profitable to seek an outlet for at Calcutta *via* Assam, than at Rangoon *via* Bhaumo. If Rangoon were still in the hands of the Burmese, the case might be different, but now that Lower Burmah has become a British possession, to attempt to divert the course of any trade which, left to itself, would naturally seek the Irrawady, or any trade which, on the whole, could be more economically conducted by the way of the Irrawady, appears to me to be futile and impolitic.

One reason that forbids me from indulging in the hope of seeing commercial intercourse established between China and Assam, through northern Burmah or the Shan States beyond is, that no native trade at present exists, even in the humblest and most insignificant form, between the two countries. Now native trade, though usually wanting in expansion beyond the most moderate dimensions, is often audacious in its enterprise, and penetrating in the extreme; it may flow by minute and scarcely perceptible channels, yet still it will find its way through every crevice, and ooze out at the most unexpected and inaccessible places; and its absence in this case appears to me peculiarly significant. The Shans, the Burmese, and the Chinese are all three keen traders; how is it then that they have not found their way to Assam by some route? Debrooghur is known, at least by name, to thousands and tens of thousands of Khampteas and Singphoos; they know that they can obtain there piece-goods of any description and in any quantity; and that their ponies, their cinnabar, or their leaf-gold would be taken as readily in exchange there as at Rangoon or Moulmein. How is it, then, that they do not come?

Though I am not so sanguine as some persons, the main idea of opening a communication with China may, I think, very possibly be realised on the north or right bank of the Brahampootra, and by one or other of the passes leading into Thibet. I would in particular invite attention to the route from Towang through the Koorecaparah Dooar, which does not, in any part, enter the territories of the Deb and Dhurne Rajahs of Bhootan, but lies entirely across a tract of country dependent upon Lassa, and forms an integral portion of Thibet, so that, as was most happily observed by Pemberton, "we have literally the Chinese and British frontier in immediate contact with each other at a Dooar in the valley of Assam, not more than fifteen miles from the northern bank of the Brahampootra."

Sixty years ago the trade between Thibet and Assam by this route was estimated to amount to two lacs of rupees per annum, and this though Assam was then in a most unsettled state; and up to the time just prior to the Burmese invasion, the Lassa merchants brought down gold to the value of 70,000 rupees. The occupation of the country by the Burmese, however, killed the trade; and in 1833, only two Thibetan merchants are said to have come down; but since that period there has been a gradual revival of it, which even our late quarrel with Bhootan did not interrupt, and it has now every appearance of being flourishing and on the increase.

The trade is carried on principally through the instrumentality of a fair, held at a place called Oodalgooree, situated at the mouth of the Kooreapara pass. I visited the fair in 1867, and again this year, and was much interested by what I saw of the Thibetan traders. I found men among them from all parts of Thibet, from Lassa, and from places east, and west, and even north of it; some of them looked like Chinamen, they wore Chinese dresses, ate with chop sticks, and had about them

various articles of Chinese manufacture, as pipes, strike-a-lights, and embroidered purses, such as I have seen in use among the Chinese at Rangoon and Moulmein. They were accompanied, in some cases, by their families, and carried their goods on sturdy ponies, of which they had a great number, I should think some hundreds. Besides the Thibetans who attend this fair, there are some who still take the alternative route through Bhootan *via* Tassgong to Hewangiri.

The want of competent interpreters prevented me from seeking information from these merchants, about the road by which they travelled. I have no doubt that it is beset with great difficulties, and if it be alleged that they are greater than would be encountered on the route *via* the Patkoe pass, I am in no position to dispute the assertion. At the same time, there is no getting over the fact that, a trade between Assam and China being the object in view, we have it actually made to our hand, on the one side, and only wanting such extension and development as we have a right to suppose we could give it; while, on the other, not the faintest trace of any commercial intercourse between the two countries exists, and we are absolutely without any data whatever for the presumption that we could call it into existence. So much evidence, also, in favour of the practicability of the Towang route, at any rate exists, as may be derived from the circumstance of women, and children, and laden ponies coming down to Assam by it. I may add that I noticed particularly the good condition of the ponies, and that there were few—indeed I do not remember seeing any—sore backs among them. On the occasion, too, of the difficulty which arose between us and the Thibetan authorities, in 1852, about the Geling Rajah, Tartar troops were pushed towards our frontier by this pass, and the demonstration was considered so formidable, that we put a body of 400 troops with artillery, in camp at Oodalgooree to meet them.

If the Thibetans can come to us, surely we can go to them; indeed, in Assam it has never been supposed that there was any real obstacle to intercourse between the two countries, save the jealous restrictions imposed by Chinese policy and influence. In a brief notice which I read in the *Friend of India* newspaper, of a memorandum by Capt. Montgomerie, of the Trigonometrical Survey, it is stated that the Thibetans were in the habit of resorting to Towang for rice. Now it happens that rice is the principal commodity exported from Assam to Towang, and so, therefore, the Thibetans would seem to be dependent on us for food, in which case it is possible that we might be able to exert a certain pressure, to induce them to reciprocate the freedom of trade which we allow them. Our relations with China are also very different from what they were 20 or 30 years ago, and a rescript might now, perhaps, be obtained from the Chinese government, requiring the Thibetan and Towang authorities to assist us. In a political point of view, I should suppose that the opening of communications between China and Assam, *via* Thibet, would be more valuable than that by Northern Burmah and Yunnan, while its scientific interest must be held to preponderate beyond all comparison. The identification of the Sampoo river with the Brahampootra, which is still matter of conjecture, would of itself amply reward the exertions of any expedition which should succeed in establishing it.

DISCUSSION.

Major-General Sir HENRY RAWLINSON said—My Lord, I have listened with great attention to these two papers. They are both interesting. I will consider the last one first, as it is more immediately in the recollection of the meeting. The main object, as I understand, which we have in view, and to which these papers are directed, is the opening and facilitating trade communication between India and China. I say the main object, because the mere transit trade of Thibet itself, which has been also alluded to, is not nearly of such great

importance. Now, all the information which I have been able to collect on this subject leads to a conclusion very different from that which is given in Colonel Hopkinson's paper. It is a subject which has created much interest in China, in India, and even in England. It is, in fact, one of the great commercial desiderata of the present day. Mr. Cooper's journey was undertaken specially for the purpose of elucidating the subject, and Captain Sladen had the same object in view; and the result of those journeys, I think, points out undoubtedly that the real line of traffic is that conducting from the Irrawady in Burmah to the Yang-tse in China. It leads from Bhamo to Momein (to which point Captain Sladen penetrated), from thence to Tali, and so on to a place of great importance, Cheng-king, on the river Yang-tse, up to which point that great river is navigable to steamers. We are in possession of most important reports and documents in relation to this subject, which I hope, in the course of a few months, will be made public. There is especially a report by a European gentleman, of very high cultivation and extensive knowledge, who has resided in the neighbourhood of the Yang-tse for the last twenty years, travelling between Lassa and Cheng-king; he has prepared a most elaborate report on the social and political condition of the country and its commercial capabilities, a report which is of great interest and importance at the present juncture, and which he placed at the disposal of Mr. Cooper. It was indeed under his direction and advice that Mr. Cooper, I believe, performed all the latter portions of his journey. The gentleman in question does not, for obvious reasons, wish his real name to be known, but he writes under the title of "The Old Resident," and he points out that there are three great natural centres of trade, and, it may be said, of civilisation, in South-Western China; one is Cheng-king, which is the highest point to which the Yang-tse is navigable by ordinary steamers, though small steamers can pass 100 miles further up to So-cheu; another is Bathang, on the frontier of Thibet; and the third is Tali, near the Burmese border. Cheng-king, in connection with the two other points, forms, indeed, a triangle; that is, from Cheng-king to Bathang, the distance is 500 miles; from Bathang to Tali, 275 miles; and from Tali to Cheng-king, 510 miles. Those three stations are of such great importance, both commercially and politically, that the "Old Resident" advocates very strongly the establishment of European factories or consulates at such points. Now, this is a matter which requires great consideration. The course recommended by the "Old Resident" is also strongly advocated by the British merchants in China, as a necessary preliminary to the opening of the overland trade between China and India, and I have no doubt that the scheme has received, and will continue to receive, full consideration by the Foreign Office, for, in real truth, it is surrounded with difficulties. The Chinese, as you are all aware, have ever shown great repugnance to the introduction of foreigners into the country, and have thwarted as much as possible all attempts in that direction; and in this case not only the government but the local interests also must be considered. It seems to be the opinion of our minister at Peking at present, that a certain degree of pressure might lead the Chinese government to sanction the establishment of English factories, at the three points which have been thus indicated, but he fears there would be great opposition on the part of the local population, as the Chinese traders would be little disposed to welcome foreign competition in a lucrative trade which is now all their own. We have little idea in this country of the importance and richness of these tracts in South-Western China. Cheng-king, on the Yang-tse, is the centre of an immense trade, and Tali, in the province of Yunan, which is the next great station on the road to Burmah, is situated near a navigable lake, forty-five miles long and twelve to fifteen miles in width, and is surrounded by nine great and fertile plains. The population of these plains is estimated

at over 400,000 souls, and they are generally peaceful and well-disposed. The products of Tali are coal, gold, silver, porcelain clay, musk deers' horns, pearls, diamonds, amber, lead, iron and copper (red, yellow, and white) in immense quantities, also tin and white marble. The native population of Tali are, as I have said, generally peaceful and well-disposed, but they detest the Mahomedan yoke under which they are now groaning. (I should have mentioned that there is said also to be a mine near Tali of a most valuable kind of iron, which is of such a character that the inhabitants make their swords and gun-barrels from the metal direct, without subjecting the iron to any carbonizing process.) This account, which I have taken from the "Old Resident's" Report, shows of what immense importance these districts are, and how desirable it must be to establish through them direct communication between China and India. Mr. Cooper, in his attempted journey, arrived safely at the frontier town of Bathang, but from there he was unable to penetrate into Thibet. Then he turned south, and tried to go to Tali *en route* to Burmah, but he failed also in that object, and was ultimately obliged to return to Shing-hae by the Yang-tse. The route from Bathang to Tali, however, presented no physical difficulties; he was merely baffled by the jealousy of the Chinese authorities. Captain Sladen himself penetrated from Bhamo, the frontier town of Burmah, to Momein, in the Panthay province of Yunan, now under Mahomedan rule, and independent of the Emperor of China; and the governor of Momein, who treated him with the greatest distinction, offered to send a party of 1,000 men to escort him across the Kah-kyen hills to Tali, which offer, however, was not accepted. In former times it is asserted that hundreds of caravans passed by this route between Bhamo and Tali, but since the Mahomedan war of independence all traffic has been stopped. The hill-men in the Kah-kyen hills are reported to be naturally quiet enough, though for the moment excited by the war raging round them. It is that war which is the present obstacle to the prosecution of trade. Twenty years ago the Mahomedans of Yunan rose in rebellion against China, and the war which was then commenced is not over yet. The inhabitants, it must be noted, are not generally Mahomedan—of the whole population, indeed, nineteen-twentieths probably are Chinese—but the one-twentieth of Mahomedans have nevertheless established an independent government, dominating the Chinese peasantry, and bidding defiance to the authority of Peking. It is a moot question among British merchants in China whether this independence is to our advantage or not; that is, whether it would be better to negotiate direct with the independent Yunan Mahomedans, or to aid China in re-establishing her power. Under present circumstances, however, nothing is likely to be done either in one direction or the other. The French, it is said, purposed at one time to unite Yunan with their possessions in Cochin China, and even commenced negotiations for that purpose, but the scheme came to nothing, and Yunan is at present free from all European engagements. I have confined myself hitherto to the consideration of what I conceive to be the great natural route between India and China—a route which, I have no doubt, will, sooner or later, be fairly opened out for the commerce of the world. It remains to consider the line which was specially alluded to in Dr. Campbell's paper, viz., the Great Northern route by Lassa. The road through Thibet has always occupied considerable attention, connected as it immediately is, not with Burmah, but with India; but the real fact is that, of late years, and even at the present time, the jealousy of the Thibetans has rendered this route practically impossible. The Nepaulese are jealous enough, but the Thibetans are infinitely more so. There are, indeed, two very curious documents which have just been received from the East, and which forcibly illustrate this jealous feeling. When Mr. Cooper desired to prosecute his journey from Bathang

to Lassa, he produced the permission of the government authorities at Pekin to pass through the country, but he was nevertheless refused admission into Thibet; and we have now a translation of the official answer which was sent back by the authorities at Lassa to Pekin, and which is neither more nor less than an absolute refusal to obey the Emperor's order. They wrote from Lassa, "We know better on the spot what is for the interests of the Buddhist religion, and we will not, under the circumstances, permit Europeans to pass through this country." "Moreover," they added, "all the orders that we might give for the purpose would be inoperative; Europeans could not pass through Thibet in safety, and it is at their own risk if they attempt to do so." The answer of Jung Bahadoor, of Nepal, was to the same effect. We know, indeed, that Capt. Montgomery's pundits were last year in fear of their lives at Lassa; in fact, if their Indiannationality and connection with the British Government had been discovered, they would most assuredly have been murdered. Therefore I look upon anything being done at Lassa, in the way of establishing a commercial post, as quite impossible. It is the line through Burmah, conducting from Tali to Bhamo, to which we shall have to devote our attention, as the only practicable means of passing from China to India. I admit the great advantage there would be in having the upper or Thibetan line also available for traffic, but at present, from all the information we have, I am bound to say that I think that line is quite impracticable.

The CHAIRMAN—Will you give us your opinion with regard to another route, recommended by Captain Sprye, more to the south?

Sir HENRY RAWLINSON—The Sprye route does not conduct to Yunnan; it passes into Cochin China far to the south, the main object being to cross the peninsula so as to arrive at a convenient port for sea-communication with Hong Kong. I am glad, however, that the question has been put to me by the noble lord in the chair; it gives me an opportunity of imparting information on a subject which has been hitherto but very imperfectly understood, the Indian government having been much blamed for throwing cold water upon the efforts made to open this communication through Southern Burmah. It has been said, indeed, that the government have blown both hot and cold on this matter; that one Secretary of State sanctioned measures which another Secretary of State refused, and there is, perhaps, some truth in the complaint. We cannot, however, squander the resources of India on a mere Quixotic undertaking. There might be practical good which would overbalance the risk of failure and a certain expense; and in this view a preliminary survey will be prosecuted. In reference to the trade with Central Asia, I may mention the circumstance that information has reached us that Mr. Shaw, a British merchant, has reached the city of Yarkand. Letters which I have received from Dr. Cayley states that Mr. Shaw had reached that city, and was received there with distinction. It is a fact of great importance that a British merchant should have reached so distant a point without the interference of the government. At present we have no reliable information whether Mr. Shaw will succeed in establishing a factory, or entering into any extensive arrangements for trade. He will meet, no doubt, with great difficulties. In the first place there is the difficulty of passing through the inhospitable tract of country between Leh and the Turkistan frontier. From the enormous elevation of the road, it is very inconvenient for travelling, though Mr. Shaw has shown the possibility of passing over it. Then, when he has got to Yarkand, and established himself there, he may be able, perhaps, to supply the tea wants, tea being the staple of commerce of Chinese Turkistan, but he cannot furnish tea to other parts of Central Asia, or introduce it into the Russian territory. There is an organised prohibitive tariff, so that not an atom of tea can reach Russian Turkistan legitimately. They may smuggle the article, it is true; these prohibi-

tive tariffs, indeed, are evils which correct themselves, and, ultimately, I have no doubt tea will be smuggled in, but at present the prohibitive tariff is effective, and merchants who follow Mr. Shaw must content themselves, therefore, with supplying the wants of the independent districts alone. There is, however, considerable merit in what Mr. Shaw is reported to have done; not that there is a very large population to be supplied, but the people, such as they are, are inveterate tea-drinkers, and now that they are independent of China—in fact, at war with China—they have no means of supplying themselves with tea direct from China. They can only get it either from the Russian territory or from us. Hitherto it has been said they do not much like the Kangra tea; they find it too strong, but they will take that article rather than none at all. With regard to Mr. Hayward, we have no letters from him. He is occupied not with trade, but with geographical exploration, and we are led to understand that his discoveries in Thibet are of great interest and importance. There would seem, however, to have been some jealousy between Mr. Hayward and Mr. Shaw, so much so that when they met on the frontier they pretended not to know each other. They each lived in a different part of the camp; and for the sake of mutual safety, it was thought advisable that there should be no communication between them. According to the last accounts, Mr. Hayward was still detained on the frontier, but on that, as well as on other matters of interest connected with his journey, we have not as yet any reliable information.

Mr. WYLLIE, said he could offer only a few disjointed remarks on this subject. Sir Henry Rawlinson had drawn a just distinction between the trade from India northwards and north-westwards with Central Asia, and the eastward trade with China. He (Mr. Wyllie) would confine himself to the latter topic. He concurred with Sir Henry Rawlinson that it was the trade between India and China which was the great desideratum. If we could extend our trade with China *via* Thibet or any other country, it would be very desirable, but as for Thibet *per se* it was altogether barbarous and barren, and there was not much to be got out of it. Sir Henry Rawlinson had brought before their notice three places which had been particularly recommended as depots for trade by the "Old Resident," viz., Tali-foo, Bathang, and Chengking. He (Mr. Wyllie) knew something of the two former places, though his attention was called, when in India, to the political condition of Western China rather than to our commercial relations with that part of the world. With regard to Tali-foo, it was the head-quarters of the Mahomedan revolutionists called Panthays, who had broken off all relations, commercial as well as political, with the great Chinese dominion of which they were formerly an integral portion. We knew what a difficult matter trade was, even in this country. The difference of a few pence in a customs tariff was sometimes sufficient to extinguish a trade. It followed that the first element of trade was security and good government. There was no such thing in the whole of Western China. Besides the Panthays in Yunan, the other home provinces of Kansu, Shensi, and Sechuen, and the outlying territory of Ili were all, more or less, in revolt, and for the last six or seven years they had been a prey to banditti, and spoliation, and every form of civil misery. Bathang, in this respect, was far worse off than Tali-foo, as proved by the recent experience of some Nepaulese travellers. The Nepaulese ruler was bound to send every five years a mission to Pekin, with presents to the Emperor of China. In 1867, Jung Bahadoor's envoys reached Bathang, but at that point they were prohibited from going on towards Pekin, and they returned, having failed in their mission, with a lamentable description of the state of things which they found. Spoliation prevailed in every form, and the governor of the province was living in a miserable shed, glad to get shelter there. With respect to the two explorers, Shaw and Cooper, the former it appeared had got to Yarkand, and all he (Mr.

Wyllie) could say was, he hoped he would be able to get back again when he wanted to do so. His ever having reached that city appeared to him a most memorable feat. Mr. Cooper had already tried to get from the Chinese provinces into India, but he only got as far as Bathang, where he was turned back in one direction at the time when the Nepaulese ambassadors were sent back in another direction. He believed Mr. Cooper's present project of penetrating from India through Assam to China was hopeless.

The CHAIRMAN asked if Mr. Wyllie could state how far the Chinese had been driven back from Eastern Turkistan.

Mr. WYLLIE replied that he had no very recent information. But it was quite certain they had been driven back to the great desert of Gobi, and the greatest hope for peace, and therefore for trade, was that the Russians would annex the whole territory, and become our neighbours in that part of the world.

Dr. CAMPBELL begged to interpose that there could be no doubt that the refusal to allow Mr. Cooper to pursue his journey was made by the Chinese officials in the confidence of the government at Pekin. This might be gathered from what we formerly experienced in Canton. The Chinese official, if he knew the policy of his government, would adopt it in the face of any formal orders from the government. If the official was denounced for what he had done, he had only to fall on his sword and kill himself. The Chinese had great repugnance to communication with foreigners. He had similar experience in Darjeeling. When that tract was ceded to us by the Rajah of Sikhim as a sanatorium, he wished to be on a friendly footing with us. Soon after that territory was ceded, the Rajah got into the hands of a Thibetan, and under his influence imbibed the Chinese principle of exclusiveness, and he wrote to say, if we touched the soil of the country to form roads or carry out other works, the whole of the gods would be incensed against us; and the inhabitants were secretly kidnapped, carried into Sikhim, and kept in slavery. This state of things having continued for some time, it necessitated the British government entering into specific stipulations that the individual who favoured the policy of China should be expelled from Sikhim, and not be allowed to enter the kingdom again. From that day to the present no difficulty had arisen. The portion of country between the Brahmapootra and Lassa was the most precipitous of the whole of the Himalayas; and the people the most violent and blood-thirsty—the very last that Europeans would think of going amongst. The last Europeans who went there were two French priests, and they were very soon murdered; and their fate was incurred, not so much because they were Europeans, as because they had been well treated in the dominions of another chief. At the present time, the rice, which was sent to Lassa in considerable quantities, went through Darjeeling and Sikhim. The reason was, the Chinese soldiers at Lassa preferred rice to any other food, and the whole of the rice that went to Lassa came from the plains of Bengal, and through Darjeeling and Sikhim, principally for the benefit of the Chinese soldiers.

Sir HENRY RAWLINSON, in explanation, said he thought there was a misunderstanding on the part of Dr. Campbell as to the communication he had referred to between the authorities of Lassa and Nepaul. He (Sir H. Rawlinson) did not allude to the instructions sent by the Nepaulese government to its ambassadors to bring back Mr. Cooper with them, but he referred to a sort of protest which the government of Lassa addressed to the government of Nepaul, in answer to a letter begging them to permit Mr. Cooper to come through their territory to Nepaul. That answer was barely courteous, and it was somewhat of an humiliation to Jung Bahadur, to meet with such a rebuff. He thought Dr. Campbell had spoken of the Lassa government as he knew it five or ten years ago. He did not take into account the blow which Chinese authority had recently

received in all those countries to the south-west. Chinese authority in Lassa was now a mere cypher, as far as the civil power was concerned. The protest sent to Pekin was a spontaneous action of the Thibetan government, and rested on the ground that, whenever Europeans appeared in their country, the visit had been followed by all sorts of terrible disasters, drought and locusts, plague and pestilence, so that all were impressed with the belief that, if European travellers were permitted to visit Lassa, Buddha would be displeased, and would subject the country again to the same miseries. But Lassa was not such an unknown country as was supposed. Huc and Gabet were there for years, and they gave a full account of the place. Other missionaries had also been there and it was by no means an unknown place; the "Old Resident," indeed, who, he might state, was a highly-accomplished Frenchman, had lived in Lassa ten years, passing his time between that place, Bathang, and Cheng-king. He must add that Mr. Cooper had discovered another middle route, which was sometimes followed. This route led from Bathang to Zi-yu, a Thibetan town at the eastern foot of the Himalayas; from thence it crossed the mountains to Sud-ya, on the Brahmapootra, a town in British territory, only 180 miles distant, and having direct water communication with Calcutta. From Bathang to Zi-yu the distance was 125 miles, and 65 miles on to Sud-ya. Mr. Cooper stated that caravans of ponies and asses were in the habit of passing from one side of the mountains to the other. The country was difficult, and inhabited by wild tribes, so that, though much the nearest, he did not think the route would ever be much followed. There was this also to be considered—it did not lead anywhere, the mere transit from Suddya to Bathang being of no importance. The last news of Mr. Cooper was that he wanted to visit Suddya, and penetrate from thence either to Lassa or Bathang. With regard to the hill-tribes south of Tali, said to be so savage, those to the west of the Irrawady were so undoubtedly; but of those to the east of that river, Capt. Sladen gave a different account, and Mr. Cooper also. In respect also to Tali-foo, the accounts of the "Old Resident" did not agree with Mr. Wyllie's impression of the entire disorganisation existing in the country; he stated, on the contrary, that at Tali-foo perfect order prevailed, and that the Mahomedans were in full power there, the Chinese having given up all attempts to maintain supreme authority. Although at Bathang a guard for Europeans was necessary, yet they might reside at Tali-foo without danger or risk. Generally he concurred with Mr. Wyllie that from European settlement small good was to be obtained, with a great deal of attendant risk, but he (Sir H. Rawlinson) did not think that such would be the permanent condition of the country. He looked to the time when communications would be opened out, and a high road of traffic established from the Irrawady to the Yang-tse-kiang.

On the motion of Mr. SPENCER PRICE, seconded by Mr. HYDE CLARKE, the discussion was adjourned till Friday evening, 4th June.

The adjourned discussion was held on Friday evening, June 4th; Lord WILLIAM HAY in the chair.

The following letter from Mr. Hyde Clarke was read:—

I regret very much my inability to be present this evening, as it deprives me of the opportunity of hearing your communications on an important part of the subject, and of myself sharing in the discussion.

Appreciating the general importance of the subject of communication with Central Asia, I should desire, on this occasion, to look at it chiefly from its commercial aspect. My attention was early drawn to it while act-

ing as honorary agent for Darjeeling. Whatever may be our views as to the functions of government in commercial questions otherwise in India, yet with regard to Asia beyond the frontiers, it is the duty of the government of India, as a government administering the public works, and as a landlord, to provide the requisite communications for the development of the trade.

If, as Sir Henry Rawlinson states, the present trade is inconsiderable, and so far, *le jeu ne vaut pas la chandelle*, yet, as he says, it is susceptible of development. It is idle to look for this development from the native merchants of India pottering at it; they cannot make roads in troublesome passes; they have no diplomatic authority to negotiate with chiefs and tribes in the defiles. It is only the continuous action of the government that can effect this, doing what the great governments of antiquity did—what the great government of the United States is doing in our day. This, too, must not be forgotten, that since many of us begun to consider this matter, India has become a producer of tea and other commodities used in Central Asia, which enable us more readily to carry on this commerce. We have, consequently, additional reasons for promoting this trade. The trade, therefore, which was formerly great, which has perished in the decline of the old governments of India and in the rank growth of the jungle of barbarism, will become still more considerable than of old. When the communications are cleared politically and physically, India, which is now self-contained, will have a back country, and it is the bounden duty of the government to take charge of the necessary measures.

As to replacing even the Chinese government by the Russians, or encouraging or allowing the Russians to exterminate Yakoub-Kooshbegi, and the people of Eastern or Western Turkistan, I cannot concur with Mr. Wyllie. Commercially and politically the government of Russia is the same as the government of China—one of monopoly and exclusion, and a crushing oppression on human nature. Had Turkistan been more carefully looked after by our own Indian government and by the Foreign-office, the condition of Turkistan might have been ameliorated, and many of the recent disasters averted. At Constantinople, a centre of resort for the Turkish race, no systematic exertion is made, either with the Ottoman government or the natives of Turkistan, who arrive there during the Hajj.

One reason for the neglect of our interests in Central Asia is, undoubtedly, the apathy of our government; another is the few persons showing a care for those interests. In my own belief, the chief support of our policy in Central Asia is Mr. John Murray, the publisher, who devotes the only funds to the purpose, and affords the only encouragement to travellers and explorers at his own risk. The only reward Vambéry has received has been from Mr. Murray. Another votary of Central Asia was the late Lord Strangford, and now we depend greatly on the attention Sir Henry Rawlinson can give in share with his public duties and his labours as a cuneiform discoverer. Sir Roderick Murchison, as President of the Geographical Society, has kept the region before the public, and Mr. Wyllie and Mr. Eastwick have charge of it in Parliament.

By systematic action, the question of our relations in Turkistan and of trade with Central Asia can alone be beneficially pushed. There must be some one in India, some one in the India-office at home, and some one in the Foreign-office conversant with the business, and specially appointed to take charge of it. There must be a special person at Constantinople, another at Teheran, and some one at Peking. The cost would soon be repaid, even if charged on the revenues of India. Every traveller should be encouraged. Professor Vambéry may be again started on another venture, and be provided with a professorship or agency, instead of a sum of £60 a year from the University of Pesh. Independent travellers should be assisted to explore at their own risk,

and rewarded on their return. Unaccredited commercial agents should be allowed to select stations in the cities of Turkistan, and draw small salaries. Above all, the functionary with the supreme government of India should watch our relations with the native tribes from Afghanistan to the Indo-Chinese frontier, and urge the government to follow up each tribe, by employing officials conversant with each language, and by encouraging the study of the aboriginal languages. This is one of the great means of effectually promoting the welfare of India, not only with regard to external trade but internal development.

There must be some means provided, my Lord, by which the counsels of functionaries like yourself may, on their return home, be made officially available for the public service, instead of their being offered as an intrusion and rejected with scant attention. There would be no harm, but much good, if there were councils here for the affairs of Western Asia and of Eastern Asia among other matters. The division of labour and the special applications of power are the most effective instruments in promoting political as well as industrial progress.

Mr. SPENCER PRICE expressed his regret that speakers at the previous conference, whose remarks carried so much weight with them upon Central Asian questions in general, encouraged us so little to look for success in the endeavours of those who are seeking to find a practicable trade route between India and China, through Thibet. He gathered from the observations of Sir H. Rawlinson, that the primary, if not the insurmountable obstacle will be found in the exceeding jealousy of the Thibetan people. It would be presumptuous on his part to attempt to offer an opinion in opposition to so eminent an authority as Sir H. Rawlinson, nor, from his own experience, would he attempt to do so; but he might remark that, when in the north of China eighteen months ago, though not fortunate himself in meeting Mr. T. T. Cooper, whose name has of late become so prominently associated with explorations in Chinese territory, he did hear, from those who knew Mr. Cooper, some particulars as to the nature of the difficulties he considered he had before him. The chief difficulty appeared to be the jealousy of the Chinese authorities, and perhaps that of the Peking government nominally, but what the various mandarins could show, especially as he neared the frontier. As the distance increased, so their power became, he supposed, more individualised. This was only natural, and to be expected. He held in his hand the report of a speech delivered by Mr. Cooper before the Calcutta Chamber of Commerce last February. On the point in question Mr. Cooper says:—"The Chairman had told the meeting of some of the difficulties which he had met on the borders of Thibet. These difficulties did not originate with the people of the country themselves, who, in every instance, treated him with the greatest kindness. The only difficulties he met with anywhere were those he met from the hands of the Chinese mandarins, who, not satisfied with jealously guarding the borders of their own territory, exerted their influence with the Thibetans, which resulted in stopping him from the further prosecution of his journey." A gentleman who spoke at the former discussion, Mr. Wyllie, as he (Mr. Price) understood him, looked upon Mr. Cooper's project as a hopeless, if not altogether a visionary one. But that very practical and intelligent body, the Calcutta Chamber of Commerce, are evidently not disposed to adopt the "rest and be thankful" principle; nor, apparently, do they think so slightly of the adventurous Mr. Cooper; for we find that, fully impressed with the important results which would accrue to themselves if Mr. Cooper succeeds in establishing his route, they had resolved to subscribe and give him substantial assistance in the prosecution of his undertaking; and he thought the Calcutta Chamber was right, for it is to such men as Mr. Cooper that we have ever had to look, and must look again, for those great geographical discoveries which are

destined to inform the civilised world, as well as increase its wealth. Here was a man who carried his life as it were in his hand—who accepted all risks. Physical difficulties clearly did not appal him; but he did not disguise from himself that those which were political were important. There were were doubtless some present who would be aware that this traveller, after working his way 1,500 miles up the Yang-tse-kiang, had reached a point 200 miles of the Bramahpootra, when he was turned back by the Chinese mandarins. When he appeared before the Calcutta public, he proposed to reverse his plan of action, and, in place of reaching Calcutta from Shanghai he now therefore, proposes to start from Calcutta, with the hope of reaching the China seaport; and according to his showing, there seems to be good reason why he should succeed, assuming, as he clearly does, that the people of Thibet will let him pass through safely. Whether their fear of the Chinese power will operate to prevent their doing so remains to be seen. But the same objection can scarcely hold with the Chinese to an Englishman crossing the frontier from Thibet into China as from China into Thibet. The mischief (if mischief in their eyes there be) would be already done. China has, in point of fact, for centuries exercised a sort of paternal influence over Thibet. She supplies the Thibetans annually with from four to six million pounds of brick tea, the same article which, I believe, our planters in India have successfully imitated, and found to be appreciated by the people of the Punjab and other parts. We can hardly expect, looking at the present condition of trade on that great river, the Yang-tze, and the prospects of still further facilities of communication therewith, that an improvement of our direct China commerce can be expected through their western land route; but the access to Central Asia in this direction undoubtedly holds out in itself a sufficiently alluring prospect, not only to our tea-planters in Assam, but to our manufacturers in Manchester as an outlet for their piece goods. As regards the nature of the Chinese influence in Thibet, he believed it was well known that the Pekin government subsidised the five chief Lama monasteries, and it is certain that the Lama government issue orders that no Thibetan shall buy Assam tea. The Chinese are truly a people strangely constituted. Whilst we find them full of romantic notions of government which, in this part of the world, we have ages since dismissed as unfit for progress and civilisation, there is probably no people in the world who are more keenly alive to the value of a dollar, and the protection of their pecuniary interests. On all sides, however, it appears to be agreed, as an absolute necessity, whatever be the success which may attend Mr. Cooper or any other explorer, in a geographical or scientific point of view, that we cannot hope to establish a trade in a permanent manner along this desired route unless we have a British envoy or resident at Lassa. There were gentlemen present more competent to speak upon that point than himself; but, looking at the marvellous openings to our commerce possible in this direction, he could not but think it was a subject demanding the consideration not only of the government of India, but quite as much of our government at home.

MR. GEORGE CAMPBELL said he had very little personal knowledge of the country to the east of India, and had not had the advantage of hearing the previous discussion. The British Association did him the honour to place him on a committee appointed to address the Secretary of State on this subject. He had not the opportunity of acting on that committee, and did not well know what was done. On one occasion of the meeting of the British Association, Sir Arthur Cotton, a very distinguished man, and the great apostle of water communication, brought forward a plan for a canal to connect the Bramahpootra with the Yang-tze. It was possible there were some physical difficulties with regard to that project, but the association were agreed it was highly desirable that the country should be

explored. He had the honour of suggesting that, though it might not be possible to make a canal to join China direct with India, still there might be other advantages in making a communication of some sort between the two countries; that we might have a new road, something of the nature of the hill-road of Lord Dalhousie, and that great advantages might be looked for from it; Labour fitted for the cultivation of tea being what was most wanted in Assam, and the Chinese being a most emigrating and enterprising people, if we made a road passable for light passenger traffic, we might expect a large influx of Chinese emigration into Assam. He had read the paper which Colonel Hopkinson, an officer more conversant with this country than most other men, had communicated, and he was sorry the result, in his (Mr. Campbell's) mind, was discouraging as respects direct communication between Assam and China. If he might venture on a theory of his own, it would be this—that there is in fact, as shown by Col. Hopkinson, a continuation of the great snowy range of the Himalayas to the east of Assam, which could only be passed transversely by different passes; but a passage longitudinally along that range was almost impossible. We might pass from north to south, but could not pass along the snowy part from east to west. He thought we had neglected the precise information given by the French missionaries, who had published an exact account of the route from Lassa to China. The information of Colonel Hopkinson went to show that the snowy range was continued in that direction, and that being so, the direct route from Assam to China was impassable, but that we might either take the route somewhat further to the south, over the lower range, or get to the north of the snowy range, into the route by which he believed the French missionaries travelled, and by which also certain enterprising men had travelled from Lassa to the Chinese towns on the Yang-tze. If this was the case, we must choose between Burmah on the one side and Thibet on the other. He thought that, physically, the Burmah route was the best, but by reason of the jealousy of the people the greatest difficulties had arisen in the way of trade and commerce, whereas the less easy, but still practicable route by Thibet might have certain political advantages; but, unluckily, we had the difficulty that the Thibetans would not let us go through Thibet, or rather that Chinese authority in Thibet prevented us from passing through that territory. So far as Thibet was concerned, less than a hundred years ago we had free intercourse with Thibet. He believed it was in 1783 that a British envoy traversed these mountains, and was hospitably received by the Thibetan authorities at Lassa. At all events, he got to the capital of the Grand Lama, and entered into friendly intercourse there. It had been the habit of the Chinese, authorities when they wished to obstruct us, to put forward that it was the subordinate people who were the real obstructors, and not themselves. He was not anxious to press our trade by force of arms. He thought there was a chapter of history, in respect of our dealings with China which we could not look back with feelings of satisfaction. Still, his impression on this subject had been derived from a visit to Canton. There was a time when the Chinese government appeared extremely anxious to admit Europeans into Canton. They said—"We will do all we can, but what are we to do with these ungovernable people;" and that was the reason why they did not admit us into Canton. We overcame that resistance by force of arms, and we found, so far from the population of Canton being prejudiced against us in the way represented by the government agents, at this moment a man could walk about the streets of Canton with greater security than in the streets of London, without the slightest risk, and without the slightest symptom of dislike on the part of the population. Therefore, he thought, if the Chinese government honestly carried out their obligation, if obligation there be, with regard to giving facilities to passing through their

country, it was possible we might establish trade with Thibet, and through Thibet with China itself. He was not, however, surprised that the Chinese did not want to see more of us than they could help. With regard to the Central Asia question, a political character was sought to be given to the trade of Central Asia. We were told that we were losing our trade through the jealousy which Russia had excited; and we were, moreover, told it was necessary to establish commerce in Central Asia, and do all we could to forestal the Russians in trade. Central Asia might be divided into two parts, viz., Turkistan proper and eastern Turkistan. He must say, his own opinion with regard to Turkistan proper, looking at the position we occupy, Russia must have the best of it. They had political and commercial relations with those tribes inhabiting it, and he did not see how we could disturb them in that respect. It was not as if Russia were the only obstacle to our entering Turkistan; there was the whole country of the Affghans, not only the country of the Ameer, but the country of independent tribes, who will not permit European traffic to pass that way without exacting black mail. It was out of the power of the Ameer himself to make a safe route. With regard, therefore, to most of Turkistan, it would seem impossible for us to compete with Russia. Bokhara, as the crow flies, is nearer to us than to Russia, but these difficulties were weighted against us. If we got over the tribes of the Affghans, and succeeded in establishing commercial relations with them, we might compete at Bokhara with the Russians. On the whole subject he thought the tendency had been to exaggerate the trade and riches of Central Asia. That it was important to a certain degree there could be no doubt, but, compared with India, it was insignificant, and was, moreover, hedged in by multitudes of irreclaimable cut-throats. Though it was desirable, in a local point of view, to push our trade into those regions, still when compared with 200,000,000 of prosperous Hindoos, to add to that a small trade, only to be got with great difficulty, with 5,000,000 or 6,000,000 cut-throats, would not, he thought, justify any measures which would set us by the ears with the Russians. With regard to Eastern Turkistan he was inclined to agree with Mr. Wyllie that, in a commercial point of view, the best thing was that Russia should take possession of that country, for although the Russians imposed heavy tariffs, they wanted to get tea, and if Dr. Barry would supply them with tea from Assam cheaper than they could get it from China, he believed they would take Dr. Barry's tea and leave the Chinese article alone. With regard to Eastern Turkistan, therefore, he felt no jealousy of the Russians, but whoever might be the possessors of Eastern Turkistan, if trade could be directed across the Himalayas, we might be able to compete profitably with the Chinese at Turkistan in tea. He hoped the road commenced by Lord Dalhousie, from Simla towards Thibet, and the other roads projected from the Punjab, would be sooner or later carried out to completion, and that we should succeed in establishing trade in that direction. There was one point deserving of notice which had not been referred to, that was, that the most important article of commerce to us was the fine quality of shawl-wool which that district yielded. The Rajah of Cashmere, like most Eastern potentates, was ambitious of being a trader, and he had the monopoly of the Cashmere shawl trade, and his object was to obtain the monopoly of the whole of this great shawl-wool country beyond his own territory to the east, and which might be brought into immediate connection with our own territory. The completion of the roads to which he referred would be the most likely means of diverting that trade to our own territory in the Punjab, and we should, in the manufacture of shawls and other articles, obtain great advantages.

Mr. VESSEY FITZGERALD wished for information on two or three points. He could not agree with Mr. Campbell

as to the comparative unimportance of Turkistan. The latest accounts showed that country to be one of the most fertile in the world.

Mr. CAMPBELL asked whether Mr. Fitzgerald referred to the country generally, or only to certain tracts?

Mr. FITZGERALD could not make a distinction. The accounts he had received stated that there was a great deal of very fertile land in Turkistan. He wished to ask whether the commerce of Central Asia, in the direction of Russia, had been estimated as to amount? He suspected not, except by certain lines of caravans that existed.

Dr. ARCHIBALD CAMPBELL said accurate statistics had been published by the government of the Punjaub.

Mr. FITZGERALD wished also to know whether there was a probability of that commerce being increased to a large extent from India, and whether the power of underselling Russia was great under a system of unrestricted competition. He saw a statement in the *Standard* newspaper of that day, to the effect that Russia had imposed a duty of 84 per cent. on English muslin goods at Bokhara, which might be regarded as a prohibitive duty. Then he wished to know whether the Russian lines of communication could be increased by subsidy, as the *Messageries Impériales* in the Levant were supported by subsidy to his knowledge, as also in the Caspian Sea. He understood Russian commerce and politics were identical with Central Asia much in the same way that building operations in Paris were identical with the politics of France.

Mr. TRELAWNEY SAUNDERS regretted to say that he agreed with scarcely any of the observations which had fallen from Mr. Campbell. He had said, amongst other things, that intercourse on the Himalayas, east and west, was impracticable. He (Mr. Saunders) believed that east and west were more practicable than north and south. Again, the route between Lassa and Bathang was pointed out as a direct route east and west; but anyone who took the trouble to read Huc's account of his journey through that portion of country would see that it was one of the most frightful countries on the face of the earth. The accounts of the difficulties there encountered were such as most persons would regard as exaggerations, yet he believed there was no exaggeration in them whatever. They could readily understand from them how impossible it must be to expect commerce on anything like a large scale between Lassa and Bathang. At the same time, let not that be taken as a reason for abandoning all attempts to solve the problem they had before them, for all who studied this subject must rise from that study with great hopes for the development of trade in Central Asia, when they found that what they viewed as natural difficulties were not insurmountable by the inhabitants. The Himalayas throughout were traversed by the natives at the proper season, and that was all that could be done in the case of the Alps; and if they studied the old trade with Central Europe, which helped to make Venice rich, and the country between the Mediterranean and the interior of Europe before such roads as the Simplon and railways existed, and applied those conditions to the traversing of the Himalayas, they would find the proper solution of that great problem. A greater problem than that they were now discussing could not be presented to humanity, and it could not be expected that a problem so vast as this could be studied at first without some mistakes being committed, and he thought the greatest use of these meetings was to compare their ideas and correct one another's mistakes. In that way they got light thrown on the subject, and in the end they might hope to arrive at a satisfactory solution. They were much indebted to the Society of Arts for giving them an opportunity of discussing a question which involved the intercourse of half the population of the globe, of two hundred millions on the one side, and four hundred millions on the other. That was what they were attempting to do; and they had not to remove natural barriers, but those political

barriers which have been allowed to remain through the supineness of the people, or the governments which had the question before them. He said the difficulties were political rather than natural, either with regard to the people or with regard to inorganic nature. He believed there was no occasion to make great roads like that projected by Lord Dalhousie. He believed that was a huge mistake at this period, and that if they gave people the power to find a way, they would find it. Moreover, with regard to the people themselves, they had evidence enough to show that, when they were approached in a proper manner, the difficulty in that direction was removed. Captain Godwyn-Austin, one of the surveyors of the Himalayas, crossed the Chinese frontier. He knew there were difficulties in the way, and yet he felt himself at liberty to trespass on the Chinese territory, against the orders of that government. He could not say he approved of that; but what was the reception Captain Austin met with? Instead of being treated with discourtesy, the Chinese official came down, and told him he had strict orders to refuse permission to Europeans to pass the frontier; he also hoped he would not interpose force, and advance any further, because if he did it would cause him to lose his situation, and on those grounds he begged him to retreat. Again, he had been assured by a gentleman of great experience in China, who had passed the best years of his life in the British service in that country, that no country was safer to travel in than China, by those who were competent to convey their ideas to the natives, and allay any suspicion they entertained. But what was to be said of people who entered the country without the least knowledge of the language? That he understood to be one of the greatest difficulties of Mr. Cooper. He was told that gentleman could not speak a word of the language. Again, he did not think any steps should be entertained, here or in India, to advance across the Chinese frontier till the existing political obstructions were removed. They could not advance far in the direction of Yunnan from Assam without coming upon a residence of the Lama governor. No man was more competent than Lieut. Wilcox for such an enterprise. He approached the residences of the Lama governor and of the high priest, which were indications of a settled population, but he was compelled to return. If Mr. Cooper, or anybody else, attempted forcibly to push his endeavours too far, so as to trespass upon that territory against the will of the authorities, resistance would be interposed, and a disturbance take place. Something of that kind might have led to the death of the two French missionaries. No doubt we were entitled to cross the frontier, nor could we doubt that, if the subject were really and earnestly advocated by the Foreign-office and by our ambassador at Peking, the authorities at Peking would remove those restrictions on the part of their officials. He would now call attention to a few points which he considered of importance with regard to Central Asia. There was no doubt Chinese authority had suffered considerably in the western parts of the empire, in what was called Chinese Turkistan, and that portion of the country was now in open revolt; but, in his opinion, instead of encouraging that state of revolt on the part of the subjects of the Chinese empire, it should be the object of Europeans to aid China in putting an end to it. He believed the means of effecting that were in our own hands, without exercising undue political interference. We ought to do all we could to support Chinese power in Central Asia, for this reason, that every successful revolt in that direction was a step towards the acquisition of that territory by Russia. What did such acquisition of that territory mean? It meant our total exclusion from its trade. The Russian tariff was not an ordinary one, but entirely exclusive. It had been said of Central Asia it was comparatively worthless, its population sparse, and the commerce insignificant; and that while we have a country like India to our hand, it was not worth our attention. But did they forget that it was

precisely from those great regions that all the overwhelming hordes had come that had desolated India, China, Persia, and Europe itself? It was from that country Tamerlane and the great Genghis Khan had advanced to seize upon the territories of the south—in fact, to reach the shores of the ocean in all directions; and it was only so long as that country remained in a disorganised state,—that life and property were not safe there,—that they failed to have that development of population which led to outflowings in the way of hostile migration. It might be argued that under Russian rule there was security of life and property. Yes, but in those countries the Russians would find the population and resources for giving overwhelming influence to the Russian armies, and the power to do that which they regarded as their destiny—viz., the advancement of their dominions to the open seas. He said when once Russia obtained the control of Central Asia, she would attain a position which would make her an overwhelming power. If, on the contrary, they aided in keeping these countries, as they now were, in the hands of the Chinese, opening India as an outlet for them, China also as another outlet, it would lead to the dissemination of our trade, and afford to the people of Central Asia the maintenance of life and property, and increase of population, without danger to the surrounding countries, because these outlets would dispose of the outflowings of their population. The question that we had sooner or later to settle—and it could not be settled too speedily—was, whether these countries were to become subject to the dominant power of Russia on the one hand, or maintained under the power of China and the beneficent exercise of British principles on the other. He believed, unless we secured freedom of access to Central Asia, and carried our trade there, and opened up the doors of the Himalayas, the doors of China, and the doors of India, we should have Russian influence in Central Asia as irresistible as any that had proceeded from it.

Mr. H. STANLEY would make an observation, in answer to Mr. Campbell, with reference to Canton. That gentleman assumed that it was pretence on the part of the Chinese government, with respect to the hostility of the people towards Europeans, whereas the early history of Canton showed the people to have been very turbulent, as compared with other portions of the population of the empire, then, as was the case in later years.

Dr. BARRY would not pretend to follow the gentleman who had addressed them on the subject of Central Asia, but he thought they might leave Russia to herself. She might come to the northern aspect of the Himalayas, without giving us much concern. He believed Mr. Campbell had pointed out difficulties that exist for any power, however great, to cross that frontier to disturb us. The British government, he thought, was getting hold daily of the immense population in India—about 200,000,000—by good government, and the exercise of just laws (and more just administrators of the law did not exist); when we considered that every day we were improving our courts, giving justice to the people, and getting hold of them, he did not think we had much to fear from Russia. With regard to commerce, what was the use of opening out commerce north of the Himalayas, when we had millions of square miles the trade and commerce of which was yet undeveloped. Take Assam, for instance. He went there in 1849, and the trade was then almost *nil*; the difficulties of communication were so great that he had to order his supplies six months before he received them. The country was one of the finest in the world, and, with a population of under one million, was capable of supporting twenty millions. The valley of Assam—he could scarcely tell them what it was. If we wanted to exercise civilising influences over barbarians, let us exercise our influence to civilise our own territories before we attempt to cross that tremendous frontier. He agreed with Mr. Campbell when he spoke

about Simla. A gentleman had spoken disparagingly of Lord Dalhousie's road. He thought, if ever there was a man who graced humanity and did good for India, Lord Dalhousie was the man. History had not done justice to him. Fifty years hence we might hear more of him, and his name would be in every page of Indian history, not with regard to that road only, but in the opening out of other means of communication which had laid the foundation of Indian greatness. Who was it gave the start to railways in India, and swept away all opposition, moral and physical?

Mr. SAUNDERS interposed that he had no intention of speaking disrespectfully of Lord Dalhousie; he merely questioned the policy of attempting to make a road across a barrier like the Himalayas, at a time when it was not required for the promotion of any existing trade in that direction.

Dr. BARRY went on to remark that it was only part of a system of opening out the country—civilising by roads. It was the system adopted by Sir Henry Rawlinson. Look at his papers, and see what he wrote. He said (and it was becoming true) that the great civilisers of India were railways and roads, and he (Dr. Barry) contended that roads were the great things to open up commerce. Mr. Campbell had referred to Simla. No one was more competent to give an opinion of Simla than the noble lord in the chair. He believed that some day there would be direct communication, but he did not agree with Mr. Campbell that they would be able to get labour from an eastern direction. Those who had read the reports of the Asiatic Society for the last thirty years must be aware that communication had existed between Western China and Bahmoo by caravans. It was stated that a young man in charge of a tea-garden came to a misunderstanding with the native labourers, who rose against him, and having shot at them, he made his escape across the frontier. He got as far as Yarkand, intending to go to Manisa. He got upon a river leading to Burmah, but the British Resident, hearing that he had committed some crime, turned him back; and he described that he had no difficulty in getting from the Indian territory into the Burmah territory. Captain Sladen pointed out that, in course of time, no doubt that would be the route of communication with China. He (Dr. Barry) believed that was one of the great communications between China and India. He did not think the Manchester trade could be conveyed from Calcutta to Bahmoo, and thence to China; but no doubt steamers could go up the Irrawady as far as Bahmoo, whence the goods must go by caravan; and some years hence we might look to getting labour for tea cultivation in Assam, but we should never get it from Lassa.

The CHAIRMAN asked if there was any hope of obtaining coolies from the lower ranges of Assam.

Dr. BARRY said the ranges there were the same as in the north-west.

The CHAIRMAN understood there was a road through these mountains below Assam.

Dr. CAMPBELL said there was a road to Towang.

Dr. BARRY added that no doubt the difficulties north-east and south-east were insuperable, and if they went from Assam they must go south-east, and strike open one of the great channels leading to the south.

Mr. S. WARD rose with diffidence to say a few words, because, as he previously stated at these conferences, his object in attending them was to obtain rather than to endeavour to impart information; and this being the last conference of the series announced, he was desirous to state that he had obtained a great deal of information from them. It would be gratifying to the promoters of these conferences to know that a friend, to whom he sent a copy of the report of the proceedings of the first conference on tea-cultivation, had procured the publication of it in the Darjeeling newspapers, in the hope that it would evoke the criticisms of native planters, and in that event, a promise was made that he would send home the papers containing them. He hoped a similar course

had been taken by gentlemen connected with Assam, so that additional information would be obtained, which would add to the benefits of these conferences. He would not occupy them by attempting to address the meeting on the subject before them. There certainly appeared to be great difficulties in the way, but he was glad to learn, from what had fallen from preceding speakers, that the imaginary difficulties were greater than the real ones, and hoped that all difficulties, made and real, would be eventually overcome.

Dr. CAMPBELL wished to say a few words in reply to the remarks made upon the subject of his paper. In giving authentic details of the road through Nepaul, Darjeeling, and Bhootan, he was going over ground of which he had had personal experience for twenty years; but when he came to the subject of Lassa, he said there was not much known authentically, from European observation, in the present day. Sir Henry Rawlinson remarked that he did not think anything could be done in Lassa, on account of the jealousy of the Thibetans, and that Lassa itself was not so unknown as was represented. He was quite familiar with the doings of MM. Huc and Gabet, and heard of them at Darjeeling, during the whole time they were at Lassa, but they gave little information as to the trade that existed in that city with India. Sir H. Rawlinson attributed the whole difficulty to Thibetan jealousy. He (Dr. Campbell) thought the latest information on that subject did not bear that way, but it was rather to be attributed to the exclusive nature of the Chinese government. Chinese influence in Thibet was not paramount till 1783, up to which time the Thibetans were friendly to trade with us. The Nepaulese made a raid upon Thibet, and robbed the great monasteries of the images of gold and silver, on which the Grand Lama of Thibet sent a mission to Pekin, to inform the Chinese government of what had been done. An army was immediately sent into Thibet, and it marched to within fifteen miles of Cathmandoo, the capital of Nepaul, so that there was no difficulty about an army coming from the north. The Nepaulese, on this demonstration being made by the Chinese government, made a humble treaty, and they undertook to send a periodical mission to Pekin as tributaries.

The CHAIRMAN asked whether Dr. Campbell was aware of the route which that army took?

Dr. CAMPBELL said there were two routes from Pekin, both going by Lassa, and both were described in detail by Mr. Hodgson. One was from Lassa through a place called Siling, and was as nearly as possible that which M. Huc took in going back from Lassa; the other route came also by Lassa, but further north; both these routes were detailed in the *Journal of the Asiatic Society*.

Mr. SAUNDERS remarked that that was the centre of all the Chinese trade in the south-west.

Dr. CAMPBELL having pointed out these routes on the map, further remarked that Huc and Gabet remained a whole year at Lassa, and returned by the lower route. There was no doubt we might do a good trade with Lassa, if roads were opened to the frontier of Thibet. The distance from Darjeeling to Lassa was not more than 500 miles, and such means of communication as existed had been followed for a long time. He agreed with Mr. Spencer Price, that the difficulties of crossing the frontier were imposed by the Chinese government officials. They were most exclusive, but the Thibetans were not so. They were a pastoral people, and a trading people, and their religion was a tolerant one. Mr. Saunders did not sufficiently distinguish between the Chinese people and the Chinese officials. The officials were certainly very exclusive; the Chinese people, he believed, were not so exclusive. The instance mentioned of the Chinese officials meeting Capt. Austin on the frontier was a parallel case to that which he (Dr. Campbell) experienced. Having crossed the frontier, he was met by a Chinese official attended by 100 men, and similar representations were made to him that were made to Capt. Austin. The custom was

for every pass to be visited once a year by an official, who deposited a stick, on which was recorded the name of the official, the date of the visit, and the names of four or five witnesses. The stick which was deposited the year before was taken away and sent to Pekin, so that they had authentic records of every pass from Thibet to India sent every year to Pekin. With regard to the physical difficulties, Mr. Campbell said it was easier to go from south to north than from east to west, but the fact was the people went both ways.

Mr. CAMPBELL said he referred to the crest of the snowy range only.

Dr. CAMPBELL said of course it was impossible to pass that way. There was a route through the centre of the Himalayas, but when the snowy range was approached, there was no passage from east to west.

The CHAIRMAN, in summing up the discussion, said the question before them had been dealt with in so elaborate and interesting a manner, that he was relieved from the pleasure and duty of trespassing upon the time of the meeting at any great length, but he would refer to one or two of the salient points raised in the discussion. The object of the conference was to investigate how they could best promote trade between India, Central Asia, Thibet, and Western China. There was no doubt whatever that there had been trade between these parts of the world from time immemorial. The object, therefore, was not to create a trade which had never existed, but to promote a trade which might be developed into something very valuable to our merchants. Before discussing this question, in order that his remarks might be better understood, he would divide this long line of country, from the north-west to the south-east, into three sections—first, that which had to do with Afghanistan and the country west of Eastern Turkistan; secondly, that from Eastern Turkistan to Western China; and then he would offer a few remarks with regard to Western China itself. Dr. Campbell had truly said that the obstacles in the way of promoting trade between Assam and north of the Himalayas were of two kinds—one political and the other physical; and those difficulties would be found varying in degree from one end to the other. In one place political difficulties predominated, in another physical; but they found both throughout the whole length. With respect to the Afghan section, the political difficulties predominated very largely; because, though the roads leading to Bokhara were not so good as they might be, there was nothing in them to prevent merchandise being transported on beasts of burden, if not by carts. If they were to believe the statement of Mr. Hill, who had recently travelled in those parts, there was a route known as the Chitral Valley route, which was traversable by laden carts. He was not prepared to endorse that, but it had been announced to the Geographical Society that such was the case. The political difficulties might be divided into two classes—first, those arising from lawlessness of the inhabitants; and, secondly, those which were created by the advances of Russia. No doubt, without going deeper into the political part of the question, Russia was anxious to absorb the trade of that part of Asia, and would do all she could to prevent the entrance of European merchandise into that part of the country. Coming to the next section, from Kashgar to Western China, which included Great Thibet and Little Thibet, there the physical and political difficulties might be said to be about equal. Amongst the former they might include the great loftiness of the Himalayas, their extreme width, the precipitous character of the mountains, and the numberless rivers which intersect them. Then, under the political difficulties they might include the fiscal arrangements of different countries through which the trade would have to pass—Cashmere, Nepal, and Bhootan. The Rajah of Cashmere imposed prohibitive duties; the Nepalese ruler would not permit European traders to pass through his territory; and the difficulties in Bhootan were sufficiently well known.

Then there was an important element in the political part of the question, in the policy of the Chinese government in reference to Thibet. There was a difference of opinion on this subject, some persons thinking that the prohibition was due to the Thibetans themselves, and others that it was due to the conduct of the Chinese government. He was one of those who thought it was originated entirely by the Chinese, as far as we had knowledge of the country before Chinese influence extended to it, we had no difficulty in finding our way into that country; and another proof was, the moment Chinese influence was withdrawn from Eastern Turkistan, the difficulty of finding our way into that part of Thibet had diminished. Mr. Shaw had no difficulty in getting to Kashgar. But, on the other hand, it was to be remarked that that policy, though originated by the Chinese, had been followed by the Thibetans in some parts, certainly by the Rajah of Nepal, whose exclusive policy was as strictly defined as that of China. His own impression was, that the real reason why the Chinese policy had been adopted by certain chiefs on our own territory, and by the Thibetans in certain parts, was the fear of our aggressive tendencies—our tendency to annex. There was no doubt we had got a bad name for that throughout Asia. That was the feeling evidently of the late King Theodore of Abyssinia, when he said that, under the guise of promoting the interests of his country, we aimed at its possession; and Mr. Palgrave, in his work on Arabia, said that our reputation was of the highest order for dealing justly, but the natives had a notion that the further we were off the better it was for them. The Nepalese had always gone upon that principle, and he ventured to say they were perfectly right, because it was, as far as he knew, the only province in all India where the king of the country could really be said to rule his own dominions. The Rajah of Cashmere exercised considerable authority, but it was only during the six months that Europeans were not permitted to go there. We must endeavour to dispel that feeling, and the moment that was done the doors of those countries would be opened to us, and our traders would be received. He would remark, with regard to Eastern Turkistan, that Mr. Saunders did not view the position of Russia in Asia with the same complacency that Mr. Wyllie had done at a previous meeting, and he had raised the question this evening whether we should recognise the *de facto* rulers of Turkistan, or assist the Chinese to recover that province. It was a curious fact, that the same question had been raised with regard to Yun-nan. That Chinese province had been taken possession of by the Mohammedans, a small but vigorous part of the population; and as Sir Henry Rawlinson said the other night, it was a question whether we should negotiate with the Mahomedans, who had made themselves masters of, or with the Chinese, who wished to recover it. One or two speakers, he thought had underrated the value of the commerce between Assam and Thibet. In quantity it was not large at present, and he did not suppose it would ever figure very largely in commercial returns. Its chief value appeared to be this, whatever trade there would be, would be in products of considerable value, such as tea, borax, and that extremely fine quality of wool which was found only on the backs of animals in that part of the country, and which could be transported without difficulty. The great advantage of opening out that trade appeared to be that the chief persons concerned in it would be Europeans. There were numbers of Europeans settlers throughout the Himalayas, and their chief markets would be the countries north of the Himalayas, and he thought it was a great object to increase the number of those settlers. Nothing would strengthen our hold of India more than having a large number of settlers throughout the Himalayas; therefore the object was not so much to develop a very large trade to bear a considerable amount of taxation, but such a trade as would lead to the spread of European settlers.

That appeared to him the chief value of the trade at present. Mr. Saunders said, with regard to Bokhara, it was a great mistake to underrate the value of that country, because it was part of the country from which an immense number of people in the world's history had overflowed.

Mr. SAUNDERS said he embraced the whole of Central Asia, including Mongolia.

The CHAIRMAN—That was an argument which cut both ways. It was like the Scotch leaving Scotland because they thought they might make a better livelihood elsewhere, and it might be that the people of Central Asia had left it in such huge numbers because the country was not a very agreeable one to live in. He now came to the most important part—the question of Western China. He did not profess to be any authority upon it—in fact, his knowledge was recent—and all he could do was to refer to the most interesting points in connection with it. What was their object? It was to establish communication between Assam, Calcutta, and the provinces of Rangoon, and the two provinces of Yunnan and Szechuen, which were considered the most valuable in the whole of Western China. The Manchester merchant was anxious to find a country where he could dispose of his cotton goods. The three important places pointed out by Sir Henry Rawlinson were Chang-k'ing, Tali, and Bathang. Those places were the important entrepôts, and Tali was described as being a very beautiful place. There were several interests to be consulted in connection with this question. First, those of the commercial people who wished to get their goods into those markets, goods, for the most part, of a bulky description; then there were the tea-growers of Assam and others, who were anxious not only to dispose of their tea in those countries, but also to procure labourers for their plantations. The notion at the present time was, that the Assam people had strong influence at the India-office, and that they were considered in preference to the merchants of this country. Dr. Campbell had advocated a route through Darjeeling.

Dr. CAMPBELL—Yes, because it is our own territory, and free from hindrance.

The CHAIRMAN—Col. Hopkinson was in favour of the line *via* Towang to Bhamoo and Tali. Dr. McCosh, who had written an elaborate paper on this subject, advocated the route known as the Petkoi route, and there were others who advocated the route from Calcutta through Dacca to Munipore and Bhamoo. Then there was the other line by way of the Irrawady to Bhamoo; and, lastly, Captain Sprye's route from Rangoon, right across to the Mikong river, which debouches at Saigon, a French settlement, and is a river of great geographical interest, from being the scene of one of the most brilliant geographical exploits of the present century. The expedition sent out by the French ascended the Mikong, then crossed over the difficult country of Yunnan, and finally descended the Yang-tse-kiang. The only regret in connection with that exploit was the loss of Captain Lagrée, who died on the journey. These several routes might be classified into routes leading from Calcutta direct, and from Rangoon. The difficulties, he believed, were great, not so much on account of distance, but of the jungly nature of the country. Capt. Sprye's route had been strongly advocated, and an elaborate memorial in favour of it had been presented by the Chamber of Commerce of Huddersfield, which set forth the advantages of that line. The great objection to it was, that it did not lead to anything. Having got over a very difficult country they arrived at the Mikong, which was not navigable throughout, and they did not tap the rich country they wished to reach. The most available line seemed to him to be that from Rangoon to Bhamoo. The Irrawady, however, he was told, was not so pleasant a one as it looked; in summer it was dry, and in winter it overflowed the banks in a manner that rendered it difficult to navigate. That was the reason why a railway from Rangoon should be carried as far as it could be. If the King of Burmah

could be induced to allow of the extension of that railway through his dominions it would accomplish a great thing, because there was no difficulty between his country and Tali, and, upon the whole, it seemed the most feasible way of tapping these two large provinces. The next question was, what could the government do to help the British merchant in this matter? The Duke of Argyll had lately stated that the hands of the India government were full. There was scarcely any part of India where it was not desirable that some sort of roads should be made, and the government must choose those which would give the greatest amount of convenience, and do them first. He believed he was right in saying a railroad in Burmah was in contemplation. It was also highly desirable that the Assam route should be well surveyed, for it was impossible to form a correct opinion till that had been done. Confining what he was saying to the Himalayan mountains, he agreed it was desirable that Lord Dalhousie's road should be completed as quickly as possible. He was very familiar with that road, and at the time he left Simla in 1861, it had been made about half way across the Himalayas and then left unfinished, which was like building a bridge half way over the Thames, and thinking that something had been done towards advancing the trade between the two banks. That road would tap Tibet at the very point where it should, in the neighbourhood of Garoo, which was the head quarters of the wool and borax trades, and the depot of all the trade of that part of Tibet. But speaking generally with regard to the Himalayas, he was not so much an advocate for making roads; what he thought was more wanted was bridges. He could give a striking example of the importance of bridges in the case of the Chenab river. It was this: if a traveller leaving Simla desired to cross the Himalayas to Yarkand, he would follow a certain road which he (the Chairman) had passed over; he would, in about 10 days, arrive with his ponies and baggage at the Chenab river, which he must cross, but there was no bridge, except one constructed of twigs, which was hardly safe for a monkey to pass over; the ponies would have to be sent back; and to prosecute the journey, a fresh relay of ponies must be obtained on the other side. With the exception of that single river, one might ride on the back of a pony the whole distance from Simla to St. Petersburg. He was quite sure there were engineers in this country who would be able to construct a bridge over such rivers, either moveable or permanent. What he recommended was, a survey of the Himalayas with reference to the points where it was desirable to have bridges, and then he would endeavour to get the best kind of design for a light iron bridge, capable of being removed if necessary during winter; and he was sure a few thousand pounds spent in that way would do more to improve the communication with the Himalayas, and intercourse with the natives of that country, than anything that could be devised. Dr. Campbell had referred to the importance of fairs being held in the neighbourhood of Darjeeling. He quite agreed with that, and Mr. Atkinson, who had written a work on Siberia, strongly advised the establishment of fairs at Moulton, on the ground that they would do more than anything else to encourage trade between the various races of the country. He thought that was about all we could expect the government to do. There was one thing the government ought not to do, *viz.*, to throw cold water upon the expeditions of adventurous persons in these regions. The Duke of Argyll seemed to entertain the idea that nothing could be done for many years to develop the trade of Western China. That expression of opinion was rather calculated to disappoint and discourage those who were disposed to undertake these expeditions. It seemed, because we made mistakes in Abyssinia, we were now running into the opposite extreme; and because we had acted injudiciously in Africa, we were neglecting the im-

portant matter of extending our commerce in India. Mr. Wyllie laid great stress upon the unsettled state of the Chinese provinces, and said there was no prospect of carrying on a trade there; but it was not to be taken for granted that they would remain in that condition for ever. In the meantime we should endeavour to make such arrangements as would enable us to take advantage of trade when those countries became in a more suitable condition for it. We (added his lordship) are a commercial nation, and we live by commerce; and if measures are not taken for extending it in every direction, we shall be very much like human beings who are deprived of the air on which they exist.

FREE PUBLIC LIBRARIES AND MUSEUMS COMMITTEE.

The Committee appointed by the Council to consider and report how the Society may aid in promoting the establishment of Free Libraries and Museums of Science and Art throughout the United Kingdom, met on Monday last, at 3 p.m. Present:—HENRY COLE, Esq., C.B., in the chair; Gen. Eardley Wilmot, R.A.; Sir Daniel Cooper, Bart.; Messrs. Samuel Redgrave, Seymour Teulon, George Godwin, F.R.S., James T. Ware, Hyde Clarke, J. F. Iselin, and James Hole.

The CHAIRMAN explained that the Committee would have been invited to meet on an earlier day, but that government had been collecting information as to the number and condition of the free public libraries and museums established under Mr. Ewart's Acts, and it had been thought that it would be inopportune to call them together before that information had been obtained. Mr. Baines had moved an address on the subject, in the answer to which still fuller and more explicit information than anything hitherto published might be expected. A motion, recently proposed by Lord Henry Lennox in the Council, which had been referred to that Committee, relative to the distribution of works of art among local institutions, might be taken into consideration at once. As regarded the principal object for which the Committee had been appointed, a certain amount of information had been collected through the Science and Art Department. From the returns and replies collected, it appeared that 31 free public libraries and museums had been established in England and Wales, three in Scotland, and three in Ireland. These had been established, to a great extent, by spasmodic efforts and extraordinary inducements, and by accidents of different kinds, rather than by spontaneous action upon the part of the public, and a voluntary adoption of the provisions of the Acts. If the friends of these institutions trusted to popular convictions alone, there might be other thirty or so established in the course of the next 25 or 30 years. This was not satisfactory progress. He (Mr. Cole) was strongly of opinion that efforts should be made to stimulate and guide action in the matter. Almost all corporate towns, he should suppose, would be able, without feeling burdened, to maintain a free library and museum, and in some instances, indeed, they might do so by the diversion of funds, the present application of which was positively demoralising and mischievous in many cases. At Faversham, for instance, a large amount of money had been left, and had been expended in an annual "dole," that attracted idle and worthless persons from all quarters, so that the charity became an insufferable nuisance, but when it was diverted to educational objects, it became a blessing to the locality. He was of opinion that free libraries and museums should form part of a great system of national education, and that, leaving local bodies to provide the penny by rate, the State might be called

in to help. The question submitted to the Committee was, the best means of increasing the number of free libraries and museums throughout the country; a first step, he suggested, might be that the committee *should be* strengthened by the addition of members of Parliament and others who were interested in the subject.

Mr. GODWIN said that if the committee considered themselves ready to entertain that question he was quite willing that they should do so, and moved the following resolution, which was seconded by General EARDLEY WILMOT, and adopted:—"That the following gentlemen be invited to join this committee—Lord F. Cavendish, Colonel Akroyd, Colonel Jervis, Dr. Lyon Playfair, Messrs. Albert Pell, Thomas Bazley, Geo. G. C. Bentinck, E. A. Bowring, Chas. Buxton, Walter Morrison, Edmund Potter, B. Samuelson, William Tite, Edward Baines, George Dixon, J. Melly, A. J. Mundella, the Hon. Auberon Herbert, and other members of Parliament, members of the Society of Arts."

The following resolution was proposed by Sir DANIEL COOPER, seconded by Mr. SEYMOUR TEULON, and adopted:—"That the fewness of the places which (as is shown by the following list) have adopted the system of rates for the support of free libraries and museums, is a proof that the present system is insufficient for the purpose."

The following is the list referred to:—

Free Libraries and Museums Established by Means of Rates authorised by Existing Acts of Parliament.

Ashton-under-Lyne—Public Library.
Birmingham—Public Reference Library, Reading-room, and Gallery of Art, Schools of Art and Science.*
Blackburn—Public Library and Museum.
Bolton—Public Library and Museum, and School of Art.
Canterbury—Museum and Library.
Coventry—Library, School of Art.
Dover—†Public Museum.
Exeter—School of Art.
Hertford—Public Library.
Ipswich—Museum, School of Art.
K dderminster—‡School of Art, Public Library.
Leeds—Act adopted but not yet in force.
Leamington—Act adopted.
Leicester—Museum.
Lichfield—Public Library, Reading-room, and Museum.
Liverpool—§Public Library and Museum, two Schools of Art.
Maidstone—Public Library and Museum.
Manchester—‡Reference Library, District Libraries, and Museum.
Northampton—Museum.
Norwich—Public Library, School of Art, and Museum.
Nottingham—Public Library and Museum, and School of Art.
Oxford—Public Library and School of Art.
Salford—Public Library and Museum.
Sheffield—Public Library, School of Art.
Stockport—Museum.
Sunderland—Public Library and Museum.
Walsall—Public Library and Reading-room.
Warrington—Public Library and Museum, Schools of Science and Art.
Warwick—Public Library and Reading-room.
Westminster (St. Margaret's and St. John's)—Public Library and Reading-room (also a branch Institute).
Winchester—||Library and Museum.
Airdrie—Public Library, under Act of 1850.
Dundee—Public Library (Museum in progress).
Paisley—School of Art, Public Library and Museum.

* In some instances, although the proceedings of Schools of Art are conducted in Free Lib ary premises, the School is not supported out of the library rate, but from separate resources.

† 8 and 9 Vic., c. 43.

‡ 14 Vic., c. 65.

§ Special Act

|| 13 and 14 Vic., c. 65.

Cork—School of Art.

Dundalk—Public Library and Science Classes.

Ennis—Public Library (unfinished).

Mr. COLE gave notice that he would propose the following motion for consideration at a future meeting of the Committee:—"That free libraries and museums should be regarded as parts of a system of national education, and assisted by funds voted by Parliament, in addition to local rates."

Mr. HYDE CLARKE gave notice of the following motion:—"That various old public libraries, as that of Archbishop Tenison, having been dispersed, it is expedient that legal provision should be made for the security, as national property, of all libraries and museums which are appropriated to the public use."

THE LONDON CAB QUESTION.

A meeting for discussing any practical measures that might be proposed for improving the cab system of the metropolis, was held in the Society's Great Room, on Tuesday morning last, the 8th instant, at 11 a.m., invitations having been forwarded to the principal cab proprietors and others interested in the subject. In the unavoidable absence of Lord Henry Lennox, Chairman of the Council, Mr. HENRY COLE, C.B., a Vice-President of the Society, presided.

The CHAIRMAN, in opening the meeting, said he regretted the absence of the noble Lord, the Chairman of the Council; and he had probably been selected to fill his place from having formerly brought the same subject under the notice of the Society,* when it was very fully discussed, and many of the views which he then advocated had since received pretty generally the sanction of public opinion. He considered it as a great triumph that the present government had, in the face of many obstacles, so far reduced the imposts upon hackney carriages as to relieve the proprietors of what was a most monstrous tax upon them, for it was absurd to expect any reform in the system of cab management while this taxation existed. Having now got rid of this impediment, and having obtained the goodwill of the government, who intended to amend the law, it was considered that the time had arrived for considering what practical suggestions could be made to assist the government in the Bill which it was understood they were about to introduce; and in order to keep the proceedings as practical as possible, it had been proposed that the discussion should be taken under the following heads:—

Proposed division of London into districts for the "course" system.

Various classes of cabs—The question of fares—Proposals as to "free-trade" in cabs, &c.

Cab stations—Increase of cab-stands, &c.

Licensing of drivers—Inspection of cabs, whether by police or by special inspectors—Regulations as to lost property, &c.

Mr. HADDAN had sent in a description of his scheme, which he would now invite that gentleman to explain to the meeting.

Mr. HADDAN said the plan which he had to bring before them was not his own, but the invention of a son of his, who was now abroad. The question was, could London be divided into a number of districts, which might be readily ascertained, and so arranged that the fares from one district to another should be equitable and just, so as to avoid all disputes and wrangles. The system might be described as follows:—It divides London into a certain number of regular or irregular figures (say 37), distinguishable by a different letter

or figure, each of which may be considered a "course." It proposes to have the letter of the district made of coloured glass or cut out of tin, and affixed to every lamp-post in the metropolis. A table stating the fares from the various districts, is then, by the assistance of a map, accurately compiled, leaving nothing for the public to do, when hiring a cab, but to look at the nearest lamp for the initial letter or figure (say O); repeating the operation when discharging the vehicle (say at K), referring to the table for the fare (K to O=2s. 3d., or any other fixed amount). Radial divisions have been found to be the best form, as by reducing their size (or increasing the fare) gradually from the centre to the circumference of the four-mile radius, a progressively higher rate can be arrived at, thereby inducing all drivers equally to ply for hire in the suburbs as in the more crowded parts of the metropolis. Any other shape or number can of course be adopted which careful examination may determine as the best—polygons, triangles, or any regular or irregular figure. The fares from any one division to any other may be quite arbitrary; in one case (from 5 to 6), owing to the river intervening, the fare from one square to an adjoining one is considerable. Any obstacle, such as crowded thoroughfares (about the City and docks) can be dealt with in a similar manner, 3d. or even 6d. being added to those particular divisions which may require it; all to be subject to future revision, as occasion may arise. The hirer might have the option of hiring either by the "course" or time, as he might determine. If the driver be requested to deviate from his "course," such request should legally constitute a rehiring, or might, at the option of the driver, be made the subject of private arrangement. In return for these numerous advantages, the driver to be bound, after dark, to carry a small lamp inside the cab, for the purpose of more readily deciphering the table of fares. By this arbitrary system of fares, any class of superior cabs can, with great facility, be supplied with tables of fares at a higher rate, in proportion to their superiority. The usual mode of attaching the table of fares to a cab by means of a plate may be adopted, or, if preferred, the two front blinds may be printed on, one containing a small map, and the other the table of fares. In a handsome the splashboard is available. Maps on a large scale, showing the divisions, would be published; as also a book containing an alphabetical arrangement of all the streets, public buildings, &c., with their initial letter attached thus:—

Alpha-road, St. John's-wood	..	X.
Brixton, the church	9.
&c.		&c.

so that the legal fare can be determined before starting. What he considered a novel feature in his son's plan, and which he hoped would ensure its approval by the meeting, was the mode by which these districts should be indicated, viz., that the lamps all over London should have a mark put upon them, indicating the district in which they were situated. These would form in fact a physical map of the town, which everybody could see and nobody could misunderstand. It was almost universally admitted that the present system was as bad as it could be. The present book of fares, issued by Sir Richard Mayne, contained a list of over 30,000, the mere statement of which fact was enough to show that no cabman nor anyone else could be expected to be well acquainted with its contents; and, even if the book were referred to, grounds for endless disputes were still left open, and for this simple reason, the list gave a fare from a certain place to a certain street, not to a particular part of the street. There was nothing definite in it, and could not be on any such system. The plan his son proposed did not give precisely the distance from house to house, which was impossible, nor did the present mileage system. If you went a yard over the mile you must pay for another mile, and you would pay the same if

you only went a yard short of two miles, and this difficulty would attend any system of fares, and would not be increased by his son's plan. Some 18 months or two years ago he attended meetings of cab proprietors, and, with the exception of three or four, who did not seem to understand the principle, he believed they were all in favour of it. He believed the "course" system would put an end to disputes, and if it were adopted, he could not help thinking that many persons would then use cabs who now avoided them whenever it was possible. Ladies particularly would now rather take two or three omnibuses than hire a cab, not always on account of the expense, but to avoid the disputes which so often occurred. In many cases, he believed, overcharges on the part of the cabmen arose from real ignorance as to the distance travelled. This also would be avoided by the system he proposed.

MR. MEIKLEJOHN said the plan he had to propose was one which he confessed was not so ingenious or so artificial as that of Mr. Haddan, but one which appeared to him to be based upon very old-fashioned and natural principles. He had hung up on the wall a rough chart of London, marked off in quarter-mile squares. It would be found, on looking at it, that for a considerable distance through the city the river Thames formed nearly a straight line; or an arbitrary straight line might be taken along the line of the Strand and Piccadilly to Hammersmith. He did not propose to take one centre, such as Charing-cross, but a central line, either the river or an artificial line running east and west, and then mark off the squares from that, north and south. Having got that central or equatorial line, which might be distinguished by the lamps all along it having a red band upon them, he should then measure off north and south in quarters of miles, which would be numbered; and beginning at a certain point either west or east, the squares would be lettered from A to Z. By this system no guide-book or list of fares would be needed. In order to ascertain the distance travelled, add the letters travelled in to the numbers travelled in, and the sum would be the distance in quarters of miles. If the rider went northwards from A 1 to A 4, or from M 1 to M 4 in the same way, he would also know that he had gone a mile, all the lamps in each square having a letter and number to distinguish them. This scheme was first designed for postal purposes, but it had struck him that it might be turned to good account when applied to cab fares and distances, and he hoped it would be taken into fair consideration. He thought, moreover, that they ought not to contemplate dividing a great city like London merely for the sake of enabling people to go about readily in cabs. They should think also of the poor man who had to go on foot, and who wanted to know his way to the centre of London or to any other part. Now, by the plan he suggested, the lamps being numbered and lettered, he would know by seeing a No. 12 on a lamp that he was three miles from the central line, and an arrow might be marked upon it pointing out to him which way to go; whereas on Mr. Haddan's plan he would only be confused by the crosses, letters, and numbers, which were all arbitrary and conveyed no meaning. At a very little additional expense, also, the names of the streets could be placed upon the lamps, which would be a great convenience at night to strangers.

MR. GEORGE SMITH, cab proprietor and driver, said the best system was to have a regular scale of fares, such as any one could understand, like Mr. Daniel Whittle Harvey's, which was published some years ago. This was not so complicated as either of the plans now laid before them.

MR. A. H. WILBY said it appeared to him that a person would require to pass an examination at the Institute of Actuaries in order to understand Mr. Meiklejohn's system, whilst the number of marks which he proposed to put on the lamps would greatly interfere with their illuminating power.

MR. MEIKLEJOHN said if the marks were made in

coloured glass they would obscure the light but very slightly.

DR. DE MESCHIN, referring to Mr. Meiklejohn's system, said it was evident that persons taking a diagonal line would have to pay at the same rate as if they went round the two sides of a right-angled triangle, of which the diagonal line was the hypotenuse, and any one who knew the rudiments of mathematics would be aware that, on such a principle, the greater the distance the cabman went the greater advantage he would have in the fare. This system would certainly be an advantage to the cabman, but he thought it was extremely complex.

MR. CASE, cab proprietor and driver, thought that the extortion so often complained of was, in many cases, owing to the present system of fares, and to cabmen, in many cases, not knowing the distances they had travelled, while in others it might be some excuse that they had been subjected to great extortion on the part of the law. Now the excessive duties were abolished, perhaps the necessity for this would be done away with. The great objection to the "course" system was, that it would give dissatisfaction in the one case to the driver, and in the other to the public. The public would be dissatisfied at having to pay a double fare for just crossing the boundary-line of two districts, while the cabman would be dissatisfied at having to take the passenger from the furthest point of each for the same amount. He supposed the system had been adopted from that of the metropolitan police; and if that were so, one side of Gray's-inn-road would be in one district and the other side in another, and the fare from one side of the road to the other as much as from the other side of the City-road to Tottenham-court-road. He was sure that this would lead to an immense amount of grumbling on both sides.

The Rev. J. WALKER said undoubtedly, at first sight, there appeared great strength in the objection just taken, that the fare would be the same from the nearest part of one district to another as from the furthest points, but it must be recollected that a cab could not now be hired at all without incurring the charge of 1s.; and it appeared to him that these charges would, in the long run, bring exactly the same profit to the cab owner as those made according to the distances, and that, in fact, there would be no more objection to the "course" than to the mileage system. He himself had proposed a scheme for accurate measurement, never having seen this plan of Mr. Haddan's, but as soon as he saw it and heard it explained, he saw that the measurement system would not be required, for this seemed as perfect as could be. He thought cabmen should be paid regular wages, like all other employes.

LORD WILLIAM LENNOX did not think any objection had been made, or could be made, to Mr. Haddan's plan which would carry any weight with the public or with cab proprietors. The argument that a person would not like to pay a large fare for going a few yards, and that a cabman would not like to go a long distance for the same fare, would apply to any system of fares according to distance, and to many other things; for instance, you paid as much postage for a letter to Hounslow as to Inverness, and as much for drawing a cheque for £10,000 as for £2. In all these matters a general average must be taken, which, in the long run, was found beneficial to both parties. He had never heard of this plan until he came into the room, and it seemed to him perfectly intelligible, and he saw no reason why it should not be adopted. With regard to the measurement system, there would always be difficulties in the way. A person going from home might ascertain before he started where the first mile or the second would terminate, but when he got out there was nothing to decide the point if the cabman was of a different opinion, which he generally would be.

MR. MILLAR said that both of the new systems now brought forward were average systems, which were always bad, as the short fares had to pay for the long

ones. The only true and right system was that of mileage. The present system worked very well for commercial men and sharp ladies who knew their way about, but they wanted something to encourage people to use cabs who did not know the fares, and he did not think any of those brought forward would be much assistance to persons of that description. The plan he would propose was simply this—That cab stations should be provided in all frequented places, with reading rooms and proper accommodation for the men, and a ticket office, at which persons should apply who wanted to use a cab. On mentioning their destination, they should be supplied with a ticket stating the fare they had to pay. There would then be no dispute; they would simply have to pay the cabman at the end of their journey, and, if they were treated with incivility, they could complain at the office from which they took their ticket, at the first convenient opportunity. In many cases it was not so much the overcharge as the incivility which was complained of, particularly by ladies, and he believed that if proper accommodation for cabmen were provided, and if they were treated more like civilised beings, there would not be so many complaints on this head as were now made.

Mr. AUGUSTUS GOLDSMID said there were two or three practical evils which always followed upon the "course" system, as was well known to anyone familiar with foreign capitals. In any case where a long distance was traversed, the cabman was never satisfied with the legal fare, but always expected a *pour boire*. He did not think the "course" system would be practicable in a large capital like London, where there were so many different distances, but the only complete system would be that of some mechanical contrivance which should measure the distance gone over.

Mr. JOHN COCKRAM (cab-proprietor and driver) said the present system was bad enough, but it was preferable to either of those now proposed. The mileage system was the best, only both the public and cab-drivers required better opportunities of becoming acquainted with the distances. Some one had complained of cabmen not knowing London, but, under the present system of licensing, such a man would not be allowed to drive. He had known instances of men refused on this ground. He believed many cabmen were honest and sincere in their desire to do what was right. With regard to incivility to ladies or "unprotected females," all he could say, for his own part, was, that all the rudeness he had been guilty of in that respect was, always trying to keep out of their way. When an "unprotected female" wanted a cab, he always found that she wanted to go an extraordinary pace, and travel $3\frac{1}{4}$ miles for 1s. 6d. He did not think Mr. Haddan's plan very simple or intelligible. They had quite sufficient examination to go through already, and he believed they would require a still harder one before they would be able to understand such a scale of fares. At the present time there were constant wrangles as to whether such a place was inside or outside the four-mile radius, especially as Mr. Whittle Harvey's book did not agree with Sir Richard Mayne's in many instances; but under Mr. Haddan's plan there would be constant disputes whether a cab was discharged in district A or district B, or what was the letter or number from which it started. He was in favour of the present system of fares, only having the measurement more complete, so that the distances from various parts could be more readily ascertainable. He had been engaged in the cab business since 1851, and he recollected that, directly after Mr. Fitzroy's Act was passed, in 1852, there was immediately an immense number of cases before the police magistrates; and he found, on reference to Mr. Charley's "Handbook of Cab Law," that nearly all the cases there cited arose in the first few years after the passing of the Act, the decisions given being, in many cases, quite opposed to one another. The law had now become more settled down, and it was better understood; but if they were to change it, the same thing would have to be gone over again.

Mr. HASLUCK agreed with the last speakers as to the difficulties of Mr. Haddan's system, which were even greater in that of Mr. Meiklejohn.

Mr. BAKER (cab proprietor) thought the "course" system would be no improvement on the present one, especially with regard to the public. If a man overcharged or misbehaved himself, there was a stringent law to correct him, and what did the public require more? He did not think Mr. Haddan's plan very intelligible.

Mr. HOWARD (cab proprietor) said he was well acquainted with Sir Richard Mayne's tables; they took a great deal of trouble in drawing up, and a great deal more to get people to understand them, and therefore they should not be rashly interfered with, and the same trouble gone through to make Mr. Haddan's system intelligible. There was not much difficulty in ascertaining the fare if persons were inclined to be honest, and it was very rare indeed that the difference amounted to more than 6d.

Mr. CROCKER (cab proprietor) could not agree with his friends generally in finding fault with Mr. Haddan's scheme, and could not see that it was at all complicated, but, if introduced, the present rate of fare must be altered.

Mr. HADDAN said the fares quoted in the list were purely arbitrary, and only intended for illustration.

Mr. P. H. HOLLAND said there was great ingenuity displayed in both plans, and he was at first much struck with them, but the great opposition which they seemed to meet with on the part of the trade would, he feared, be an obstacle to their success. Any change in a law which affected a great number of people was in itself a disadvantage, and as persons were now accustomed to the mileage system, and the cab trade seemed to approve it, there would be a difficulty in making a change. He was constantly in the habit of using cabs, and his own experience was that cab-drivers were, as a rule, a very decent set of men; it was very rarely that he found them attempt to cheat him. The question was, whether it was worth while to make the change of estimating distances by the "course" rather than from point to point, bearing in mind that in either case only approximate accuracy could be arrived at. It was rarely that the fare and driver differed in their estimation of distance by more than a mile, which could be generally settled by giving the doubtful 6d. He believed that the only perfect system was one of accurate measurement.

Mr. ELT said the course system had been adopted in Dublin, and was very satisfactory there as well as in Paris, but he doubted its applicability to such a city as London. Mr. Haddan's plan was far preferable to Mr. Meiklejohn's; in that of the former, the great difficulty was dealt with of the river which divided London, to cross which a considerable *detour* had, in most cases, to be made. In many cases, however, the same fare would be paid for three miles as for less than a mile, and, as soon as the public understood the system, the advantage would, he feared, be all on their side, as they would take care to walk a few hundred yards rather than have another district to pay for, and stop short of their destination on the same principle.

Mr. HAZELL (cab proprietor and driver) thought the public were satisfied with the mileage system, and did not see why they should seek to change it. The great cause of over-charging was the manner in which the drivers were paid, any over-charge going into their own pockets. If they were paid weekly wages, and had a way-bill, putting down each fare therein, and giving each passenger a ticket, there would not be so many complaints.

Sir DANIEL COOPER, Bart., thought Mr. Haddan's system would be very easily understood by the public, but he doubted whether it would by the cab-drivers, nor would they feel satisfied with a system of fares based on calculations made from arbitrary fixed points, which conveyed no definite ideas of distance to their minds. A cabman going from letter M to No. 16 would see no con-

nection between that and 1s. 6d., or whatever the fare might be. Any system to be satisfactory ought to be based either on distance or time. The latter element had not been mentioned in the discussion, but all who used cabs much were aware that, if the distances were reckoned at four miles an hour for a four-wheeler, and six miles an hour for a Hansom, it was a pretty fair estimate, at any rate, if going through crowded thoroughfares in the middle of the day. It must be borne in mind that if they only paid the cabman his strict fare, at the present rates, he could not earn a decent living; and, therefore, they ought to be liberal, and he endeavoured to be so.

Mr. WRIGHT (cab builder and owner) said he could not understand Mr. Haddan's plan, and if it came into vogue, he thought it would be confusion worse confounded. There would always be disputes as to the number or letter on the lamp. Nothing, in his opinion, would work so well in London as the mileage system. He had been over to Paris on purpose to make himself acquainted with the French system, which seemed to act very well there, but he did not think it would do in London, especially on account of the bridges.

Mr. JOHNSON (cab proprietor) was surprised to see how persistently the "course" system of Mr. Haddan's was advocated. They admitted that the present system was bad, and yet they recommended one that was ten times worse. Mr. Meiklejohn's system of measuring by squares was twenty-five years old. There was no such satisfactory plan as accurate measurement. Whatever system was adopted must receive the sanction of the trade, or it would not work well. It was no use forcing a system upon them which was unjust. The "course" system might do very well from Charing-cross to the Great Western Railway, but it would be of no use when you got into a cross road.

Mr. HADDAN said that was just where it would be of use. Proceeding to comment upon Mr. Meiklejohn's plan, he said that, but for the river, he would freely admit that it was superior to that of his son. He did not think that taking the two sides of a right-angled triangle instead of the hypotenuse was more than an equivalent for the zig-zag course which the cabman had to follow, but when they came to the River Thames the whole thing fell through. The necessary computations would, moreover, form the subject of endless disputes. He did not see how persons from the country, strangers to London, could make use of such a system.

Mr. MEIKLEJOHN explained that, when a journey was performed partly on each side of the river or other central line, the two distances must be computed and added together, which would not be very much trouble. If he had an opportunity of meeting a number of cabmen, he would undertake to make the matter as plain as possible to them, which there was not time to do then. He admitted that Mr. Haddan's plan was more ingenious, but thought his own was more natural. As he had already said, his plan was intended as much for the benefit of the wayfarer as for the cabman.

Mr. SEYMOUR TEULON introduced the second branch of the subject, viz., "Various classes of cabs, fares, and free-trade in cabs." He said it was a most unusual mode of proceeding, and one which had not obtained in reference to any other matter, that the consumer, purchaser, or hirer should fix the price he was to pay. If it were simply left to be a matter of bargain between the two parties on the occasion of each hiring, he could easily believe that there would be more disputes than at present; but this was not the only alternative. When the owner of a cab applied for a license he might state at what fare he proposed to run his vehicle, and that rate being affixed to it, there could be no cause for dissatisfaction. It would then easily follow that there should be in London, as there were in many other places, and as he considered very desirable, more than one class of cab. It was a common complaint with ladies that they could not get into a hansom cab, which was the best description of vehicle at their disposal, with-

out running the risk of spoiling their clothes, and he therefore thought it desirable that, following the plan which obtained in Manchester and elsewhere, a cab-owner might obtain a license for a cab at any price, provided it were marked so that the public could not be deceived. There might be first, second, and perhaps third class cabs, but, at any rate, it was desirable that those who preferred and were willing to pay for a better cab, should have the means of being accommodated. He thought this was the nearest approach to free-trade which was possible in such a matter, and there was no doubt that, before long, the three classes of fares would settle themselves. He believed that in Manchester it had practically come to this, that there were two classes of cabs and two rates of fares, one for the first and another for the second class.

Mr. SAMUEL REDGRAVE agreed with the principle laid down by Mr. Teulon, that there should be different classes of cabs, but not that it should be left to the proprietor to settle the fares. If so, a person who held up his hand for a cab would never know what he was going to pay. He thought first and second class would be quite sufficient, the number of persons who used cabs not being so great as those who travelled by rail, and that the fares should be settled by some competent authority, which should also determine whether the cab applying was entitled to rank as a first or second class vehicle. Then care should be taken that each class should be easily distinguishable. He felt certain that, with a better class of cabs, the owners would find it to their interest to employ a higher class driver, though he had no fault to find with the men at present employed, as a whole. They might perhaps have a neat uniform, and certainly they should have better horses. He believed, however, that cab-horses had, of late years, much improved, and also the cabs themselves, but still more so the drivers.

The CHAIRMAN said that, in most things, the public had the utmost freedom of choice; in buying butter or any other commodity they could go to what price they liked, according to the quality, but it was not so in reference to cab traffic, and it was a fair question whether the ordinary principle of supply and demand could not be applied in this instance. His own opinion was, that it was an entire mistake for the legislature to fix the price. All that was required was a clear understanding beforehand between the cab proprietor and the public. He saw no objection to free-trade in this respect, as there was quite sufficient competition in the cab trade to make the fare reasonable.

Mr. TEULON said he had omitted to mention that each passenger, on hiring a cab, should be presented with a ticket, bearing on one side the number of the cab and the name of the owner, and on the other the fare to be charged.

Mr. HAZELL remarked that, when the 6d. a-mile fare was fixed, the average price of corn was 18s., and it was now 24s., whilst hay had risen in price from £3 6s. a-load to about £5 15s. Horseflesh also varied in price from time to time.

Mr. TOWELL (cab-driver) had the same objection to various classes of cabs as to the course system, or anything of the same kind—that they would all tend to complication, whilst the great thing necessary was simplicity. If a gentleman sent for a cab, very likely the servant would fetch a wrong class of cab, and then the cabman would want to be paid for his time and trouble in coming to the door. With regard to fares, a simple modification of the present mileage system would be better than anything, for both the public and the cabman understood it. He did not think the cases of imposition were numerous, for when they considered the number of cabs in the streets—over 6,000—the number of charges at the police-courts was not large. He had formerly advocated a principle which met with some favour, that of a uniform rate of 1s. a-mile, irrespective of radius, distance, or the number of persons who used the cab; something of that sort would be both

simple and precise. Free-trade in cabs was an absolute impossibility, for free-trade pure and simple meant regulating the price by the current demand at the time, and that would come to this, that on a wet night the first cab on the stand would not take a fare for less than 5s., which would soon be put a stop to. The best settlement of the question would be for the cab proprietors and the public to arrange amicably between themselves what was a reasonable fare; it was absurd for the legislature to fix the fare, utterly irrespective of the price of horseflesh or of provender. During the time of the Crimean War, horses were at an enormous price, but no difference was made in the fares. They might just as well step in and say what price the cab-builder should charge for a cab. His opinion was, that there should be only one class of cabs, improved as much as possible, and every encouragement given to civility, and a good personal appearance on the part of the cabmen.

Mr. HOWARD thought one class of cabs would be amply sufficient, if they were good. He had been connected with the trade since 1836, a proprietor for the last ten years, and had watched the thing very closely, and he always found that changes and complications introduced fines and punishments on the cab-driver. If cab-riding were made more expensive than it was, the trade would suffer, for railways and omnibuses were both cheap; they did not want a higher price so much as more work. The licensing system was at the root of the whole evil, and he believed that to try and patch it up and improve it would do no good. He was in favour of free trade; the better class of cabs would always command their fares. He had no objection to a thorough and rigid inspection, but the present system was as bad as it could be.

Mr. JOHNSON could not see why the government should take a great deal of trouble to do a lot of things for cab-owners which they did not want done, and then make them pay very heavily for it. Let the trade be thrown open to anyone, to drive a cab at what rate he pleased; if it was too high, the public would not support him. The trade were quite able to manage their own business if they were left alone. With regard to first and second-class cabs, if a man had a better cab, let him put a higher price upon it, and there was no fear of his keeping it very long on the stand if it did not pay him. Why the government had put the price on his labour he could not see; nor did he want any inspection beyond that of the public.

Mr. HOLLAND quite agreed that there should be different classes of cabs, as, in fact, there were at this moment, only they were not classified. Even now there was a custom, which was stronger than law, almost obliging you to pay more than sixpence a mile for a really good cab, and that ought to be systematised. He saw no reason why the owner should not affix his own price, provided it were marked conspicuously on the vehicle, but he thought two classes would be quite sufficient; and he should propose that the higher-priced cabs should also be compelled to give fair measure, by having an instrument attached to each, to show the distance traversed. The public would not mind paying a fair price for a good cab, so long as they were satisfied that they were not imposed upon in the distance. The ordinary cabs might then be left as at present.

Mr. PEARCE, speaking on behalf of cab-drivers, did not think the principle of free trade, which many had advocated, was applicable to cab-driving. There might be three classes of cabs on a stand, one at a 1s., another at 9d., and another at 6d. a mile. The driver of the first-class cab, if business were slack, would run at second or third-class fares, and thus the third class driver would have no chance at all of earning a living, or even of paying the proprietor the money he demanded. He was, therefore, opposed to different classes of cabs, but thought the fares should be settled by cab proprietors amongst themselves, having regard to the cost of provender and so on, the fare being legibly written on the cab. Each

driver then would get the best cab he could, in order to secure custom. It had been suggested that there should be different classes, and that a ticket stating the fare should be given to the hirer on entering, but that would often lead to a dilemma; a man would find he was in a 1s. cab when he wanted a 6d. one, and want to get out, and the cabman would object to having his time wasted—perhaps losing another fare—without compensation. Let there be one uniform fare, settled by the cab-owners.

Mr. WAKELING (cab proprietor and driver) said the government had relieved the trade of the enormous burden of taxation which had hitherto pressed upon them, but they ought to go a step further, and not interfere with the vehicles by any system of inspection. He agreed that the fares should be fixed by meetings of the trade.

Mr. SMITH saw no necessity for more than one class of cab, and considered that, in London, cabs had already arrived at perfection. If it were not so, how was it that, with so many exhibitions as they had had of late years, no improvements had been suggested? He was a thorough free-trader, and saw no reason why the government should interfere in the matter of fares, but at the same time he would allow all proper regulation, to prevent the public being imposed upon. The owner of each cab should affix upon it legibly the price at which it could be hired, and this should only be altered after a week's notice.

Mr. WRIGHT agreed in the principle of having first and second class cabs, but saw no reason why the government should step in and interfere with the price to be paid for riding in them, any more than with the price of a loaf of bread, or any other commodity. If the public did not like his charges, they would not deal with him; but it was not just that a man who gave £40 or £45 for a cab, £25 for a horse, and £5 for a new set of harness, should have no more return than a man whose whole turn-out was not worth more than £15 or £20. He thought first and second class cabs would be sufficient, and he had noticed that this classification worked very well elsewhere. He had put up a paper for a short time, in a tap at Waterloo Station, to collect the opinion of the men as to this proposition, which he begged to hand to the chairman. It would appear that the majority were opposed to having two classes of cabs, but that did not alter his own views.

Mr. COCKRAM said Lord Elcho had recently told them that the public wanted something between a cab at a shilling and a brougham at 10s. 6d., which he believed, but for the police regulations, would soon be supplied in the form of a small brougham, the charge for which the competition of the cab-masters would soon settle satisfactorily. This was a question which would bear much discussion, and he was aware that there were differences of opinion in the trade upon it; probably at the end of the season, in August or September, when cabby, to use his own vernacular, was "sucking the mop," the shilling man would come down to 9d., and 9d. to 6d., but he never knew of a case, unless it were a man going home, in which less than 6d. was taken. It was to him a question of some difficulty whether or not the police should settle the fares and inspect the vehicles. If they did not, he was afraid they would have every old vehicle, from a donkey's barrow to a break, on the stand. Probably the best plan would be for the cab-masters to settle the fares annually, or let it be done by the police authorities. But the fares of the first-class cabs should not be put outside; the less such a vehicle looked like a cab at all, the more it would be patronised.

Dr. DE MESCHIN thought the distinction of classes might easily be attained by the mode of painting, and a great deal of the present tawdry appearance removed. He was thoroughly in favour of free-trade, on principle, and it was always found that the tradesman who supplied the best article for the money made the largest fortune; but the difficulty was this, that many persons would be afraid to get into a cab unless they knew what

the fare was, and there seemed to be an objection to having it painted outside, whilst, if cabs were at all irritable, he might not like to open the door for the purpose of showing what was the fare.

Mr. CROCKER felt satisfied that having several classes of cabs with different fares would lead to confusion, unless there were certain fixed limits, say, from 6d. to 1s. 6d. a mile, so that a person hiring would know that he could not make a mistake beyond a certain amount if he hailed the wrong cab. He did not approve of regulations as to painting and varnishing, because they would interfere unnecessarily with individual freedom. He felt satisfied there were many persons who would as willingly pay as much as 4s. per hour for a carriage and a pair of horses as others would 2s. for a common cab, and that it would suit many as well to pay 1s. a mile for a good drive in a hansom, as it would others to pay 6d. and go slower. Mr. Pearce objected to the difference of fares on the part of the drivers, but there would always be the difficulty which he alluded to of the higher class fares coming down under certain circumstances, and, in his opinion, such things would find their level, and be of advantage both to the public and the driver. If he had been driving a cab all day at 1s., he should not refuse a 6d. on his road home, and then the public would get the benefit, and in the end probably the good article would drive the bad out of the market. He knew several in the trade who said that, if free-trade were introduced, they should send out all their cabs at 6d., being satisfied that, with good vehicles, they would do so much business as to be remunerative even at that price. His own opinion was in favour of limiting the fare for one-horse vehicles from 6d. to 1s., with 1s. 6d. for two horses.

Sir DANIEL COOPER would much like to have a choice of cabs, but saw considerable difficulty in the way of obtaining it, unless there were a fixed minimum which only could be claimed by any cab plying off the stand, so that a person hailing a cab in the street could never be deceived. When a cab was taken from the stand he thought there would be no difficulty. Free trade might be carried out if the cab-owner always kept his vehicle on his own premises, like the butter-merchant; but this was not so, and therefore the analogy was not complete. Cabs were public conveyances, and being so, they must, in a place like London, be under some police supervision, or they would become great nuisances; and, in his opinion, the fares should be fixed by some authority independent of the trade. If they had any complaint to make, there were ways of obtaining redress.

The CHAIRMAN said he had not been able to collect very distinctly what was really the opinion of the trade as to the desirability of having a fixed fare, or leaving it to the owners themselves. Passing to the next topic, that of "cab-stands, &c.," he said he had been much struck, when in Paris, with the great number of shops, as he might term them, where a superior class of vehicles were always on hire. It had occurred to him that the shelter thus provided must be a great protection to both carriages and horses, as well as men; and that in London, without interfering in any way with the traffic, covered stands might be erected in various places. He was told that even the heat of the sun was prejudicial to horses, and they knew it must be so to carriages, while rain and snow were equally bad. He had therefore had some models of long sheds with light iron roofs prepared, which might be seen on the table, and which were open to comment or criticism by the meeting.

Mr. COCKHAM said there was only standing room in London for 2,471 cabs, or less by 500 than half the total number licensed. Cab-ranks were either a necessary or a nuisance; if the former, they should be provided at all frequented places, within call of the merchant's house of business, or the nobleman's residence; and, if they were the latter, it was the fault of the police, who had ample powers over them. Neither at the Langham nor Grosvenor hotels were there any cab-stands, and if a cab was called

the whole neighbourhood was immediately alive, and the most cruel or most reckless driver obtained the fare. On the other hand, there was a cab-stand at the southern side of St. James's-square which supplied the whole of that aristocratic neighbourhood; and if the Bishop of London and the Earl of Derby did not complain, he did not see why other people should. Every fare from the clubs in Pall-mall was picked up by men plying about the street. More cab-stands were wanted, and in more prominent positions, at the railway stations and elsewhere. It was no use to fine men for loitering about the street; where there was work to be had, there they would go. Men were constantly being fined at Langham-place, and why should it be in the hands of one or two vestrymen to say that there should be no cab-stand there? Cab-stands should be in frequented places, such as Pall-mall, Lincoln's-inn-fields, and so on. He heard the other day that the cabmen in Edinburgh had subscribed £10 towards a covered cab-stand, and if such could be introduced it would be a most excellent thing.

Mr. CASE said everyone must agree that if cab-stands were provided similar to the models now shown, it would be an excellent thing for cabs, men, and horses. The increase of cab-stands was the most important subject which had been brought before the meeting. They wanted a cab to be a public carriage, and yet there was no proper accommodation provided for them. And here he must refer to a question which had lately been much agitated in the trade, viz., the cab accommodation at railway stations. As public carriages, cabs ought to have public stands appointed at all railway stations. At present a cab going to a railway station had to come back empty until it could find shelter at some cab-stand, so that really they only got 3d. a-mile instead of 6d., having to do the distance twice. There was thus a deterioration of the owner's property, and an inconvenience to the public. Wherever there was a call for cabs there ought to be a cab-stand; they had to pay for their licence as public carriages, and why should they be excluded from Belgravia, when Belgravia wanted them? He had had as many as five men summoned in a very short period for loitering about the Langham Hotel, but there had not been a case before the hotel was opened. The same with Jermyn-street—a man did not dare look into it without being summoned, and yet there were cabs there continually. The fact was that all these places were frequented by certain men who never went on a rank at all, and whose presence was winked at by the police, whilst a stranger would be summoned immediately; thus there was partiality exercised in favour of a chosen few, to the prejudice of the drivers as a class, and of the public. There was hardly a street in London which was not monopolised in this way with the sanction of the police, while other cabs had to drive a long way perhaps to find standing room. There ought to be a stand in every place where the public wanted cabs.

Mr. PEARCE said the question of railway accommodation for cabs had much agitated the drivers of London, and would again until it was definitely settled. The cab trade felt that a great injustice was done them in this matter, the railway stations being open only to a select few; and if the government could see their way to remedying the evil in any way, it would be a boon far beyond that of reducing the duty, much as that was prized. Men who plied about the streets of London were designated "crawlers," but what else were they to do? If a man set down his fare in the street he must make his way to some stand, which perhaps might be full, and if he dared to pull up for a moment he was summoned; he might go to Charing-cross Station, and though there were gentlemen there who wanted a cab, he dared not go in. It was said that the stations were private property, but so was the cab, and yet the government obliged the owner to run it at 6d. a-mile, and to have it in the streets at certain times under the penalty of being fined, and even the railways were obliged to run at least one train per day at 1d. per mile. On the

same principle, that of meeting the public convenience, why should not public cab-stands be provided at railway stations?

Dr. DE MESCHIN considered it was the duty of government to throw open the railway-stations to cabs. When there was only standing-room for something over 2,000 cabs out of 6,000, it was obvious that more accommodation was required, and nowhere could it be provided so easily and advantageously as at railway-stations. He considered that the Society for the Prevention of Cruelty to Animals ought to take the matter up, for a cabman had often to drive a tired and jaded horse a considerable distance before he could find a place to rest. He had lately brought the subject before the shareholders of the London and North Western Railway Company, and probably it would be more fully discussed at the next meeting. With regard to covered cab-stands, there could be no doubt that a horse would do his work longer, and require less food and less grooming, if sheltered from the weather, and there must now be an enormous sacrifice of capital in this way. Wherever the public required cabs standing-room should be provided.

Mr. CROCKER wished to endorse nearly everything that had been said with regard to covered cab-stands, which were most necessary. If covered stands were erected proprietors would send better carriages into the streets; and when once the public understood that, he did not think there would be any objection to them. The question of throwing open the railway-stations was the most prominent one in the minds of the trade, and it demanded the most serious attention, and if the government could give any aid in its settlement it behoved them to do so.

Mr. HADDAN said he believed one of the great objections to cab-stands on the part of owners of property was the assemblage of men and cabs together, and he would suggest therefore that, in such places as a West-end square, accommodation should be provided for (say) eight cabs in separate positions; it that way he did not see that any annoyance would be occasioned. With regard to the railway question, if they were to produce any effect upon the government they must treat it as one affecting the public convenience, and show how the railway cab monopoly led to the blocking of the streets, London-bridge especially, with empty return cabs. The same with regard to general increase of cab-stand accommodation, they must go on the broad ground of public convenience rather than of class interests, if any good was to be effected. Again, with respect to the railways, the case of Waterloo Station was one which should be referred to as an example of what might be done. There, instead of a few cabs paying 5s. a week for a monopoly privilege, the station was open to any one on payment of a penny, the railway reserving to themselves the right of keeping an inspector at the gate, who had the power to refuse admission to any one whose cab he considered unfit for use. If the same thing were suggested to other companies they might perhaps accede to such conditions.

Mr. CROCKER said that none of the matters mentioned by Mr. Haddan had escaped the attention of the trade; they had brought them both before railway companies and the government.

The CHAIRMAN then announced the next subject for discussion, viz., "Licensing, inspection, &c."

Mr. JAMES (cab-owner and driver) wished to draw attention to a fact that might not have come under the attention of the trade who were more centrally situated than himself, but which seriously affected their interests. All around the outskirts of London there was a class of men, not licensed, but who had been so formerly, and were well acquainted with the trade, who, under a post-horse license, frequented the suburban railway stations with old rattle-trap conveyances and horses to match, and, under pretence of being privately engaged to go either to or from the station, in reality plied for hire, deceiving the public, who imagined they were regularly licensed cabs, until, in case of imposition or overcharge,

they looked for the number, when they found out that the vehicle had none. He believed that a post-horse license only authorised keeping carriages for hire at the residence of the licensee, and therefore he thought it right to mention what was going on in order that it might be looked into and the evil remedied.

Mr. COCKRAM did not object to the examination for drivers being as strict as possible; let them have men that could read and write, that could drive, and that knew their way for five miles round Charing-cross. At present, however, the preliminary forms were signed by any chandler's shop-keeper, who might sign for a dozen men. There were differences of opinion about the inspection of cabs; he did not object to government inspection, only let it be done by properly qualified persons. How did a soldier who had spent the greater part of his time in India know the difference between iron and steel, wood and varnish, or between a sprain and a splint? Such men were well qualified to keep order on a cab stand, no one could be better, but let the cabs be inspected by some one who understood it. And let the inspection take place in the summer or autumn, not in winter, when they could not get varnish to dry. With regard to lost property, he could not designate the present system as anything better than robbery. If he found a coat in his cab, he had to take it to the police-station, wait until the inspector or sergeant had time to attend to him, then it was tied up and sealed in his presence, and he had to sign a paper and take it home, and if he had not lost it at the end of eighteen months, he was entitled to a shilling. The thing was a farce, and in fact an immense deal of property was destroyed by cabmen rather than go through all this trouble. What he proposed was, that the property should be taken to the police-station, as at present, advertised, a proper description required from the owner, and a percentage on the value paid as a reward, and if not claimed at the end of twelve months, let it be given up to the cabmen.

Mr. CASE said he believed the trade generally did not object to the license, but to the manner in which they were treated when they applied for it. If there was to be a competent person appointed to examine the cabs, let the same inspector examine the drivers; they did not like the police. They objected to the badge and the way in which they were persecuted about it. He thought it would be quite sufficient if the badge was produced when called for. With regard to inspection, what many of them objected to was, that after having been once inspected and passed, they should again be subjected to inspection and annoyance a few minutes afterwards by an incompetent person, and yet this was constantly the case if they did not comply with the waterman's demands. Let the inspection be as thorough as they pleased, but once over let them be free. With regard to lost property he had made a proposition, which had been well received by the trade, that lost property should be given up to the cabman if not owned within six months. Many a good coat was left in a cab which would make the driver look quite respectable, but it would be moth-eaten in twelve months; and for every article claimed after six months, 500 were claimed before. Where the articles were claimed the cabman should have ten per cent. upon the value, and he would thus have an inducement to act honestly. Many a shawl or other article was left behind which was valuable to the owner, but would fetch hardly anything in the market; and if some adequate reward were allowed for the cabman's trouble in restoring them, the public would reap the benefit.

Mr. CROCKER said there was a considerable difference of opinion in the trade as to the policy of licensing drivers. For himself, he could not agree with Mr. Cockram, for he believed that as long as the present licensing system remained in operation cab owners would never get the class of drivers they desired. True, at present, a housekeeper had to sign a form, saying he had known the man for four years, but that was a mere

form; one housekeeper would sign ten or twenty forms, and the police simply went through the form of asking if it was his signature; no further questions were asked about the man's character or antecedents. Then, there was the examination as to the driver's knowledge of town, and that was a great obstacle to many men, for the oldest driver in London might be completely puzzled when examined in that way. As a rule, the cab-driver was looked down upon as a low-class man; he was ordered about like a dog, and compelled to wear a badge upon his breast; while this was the case, so long would they find low-class men in the trade. Any man who had lost his character could redeem it at Scotland-yard by buying a shilling form; there was a noble spirit of toleration there, even for returned convicts; there was no difficulty in a discharged policeman or the lowest costermonger obtaining a license, but respectable men would not submit to the indignities they were subjected to. He should like to know who was a better judge of a man than the person who employed him to take out his property. If the proprietor found his own servant, there would be just as much protection to the public as at present, for in all cases the master was responsible, and he would, therefore, look much more sharply into a man's character than the Scotland-yard authorities did. Under the present system, there were a number of men with licenses who brought disgrace upon the whole trade.

The CHAIRMAN remarked that there was nothing to prevent a cab-owner from finding a competent person, and putting him in the way of getting a license.

Mr. CROCKER said he had done so several times, but respectable men would not submit to the inspection, examination, and regulations to which they were subjected. He had persuaded several out of their objection to wear a badge, but when they went to Scotland-yard and found how they were treated, they had given it up in disgust. He should like to see the licensing system abolished, and believed the public would soon find the benefit. With regard to the inspection of cabs, he should like to see that also abolished; he believed the effect was to set up a minimum standard, which no one would care to go beyond; that was, if with the aid of putty and varnish the vehicle could be got up to pass an examination, well and good; it was only waste of capital to have anything better. If the inspection were done away with, and free-trade introduced, the public would soon reap the benefit. If inspectors were appointed, however, they should be competent men, men who understood cab-building, and veterinaries for the horses. He knew that many of the trade would object to his next proposal, which was that the inspection should be quarterly, giving 21 days' grace, but it should be at the proprietor's own yard, instead of obliging him to send his vehicle, and having to wait a whole day to have it inspected. In many cases an inspector would feel justified in saying, "This cab is fit to run in the streets for three months," when he could not give such a warranty for the year. He agreed with what Mr. Case had said about property left in cabs, but there was another aspect of the lost property question, by which proprietors were made responsible for anything lost from a cab. In such cases he considered the liability should be limited to a certain amount, especially as he had known instances where parties had claimed £30 for a portmanteau and contents, which, having been afterwards traced, were found not to be worth more than £5. At present the cab-owner had no other alternative than to pay the demand, whatever it might be, or go before a jury.

Mr. SMITH did not want any licence at all. As he had said before, he was a free-trader. Why should he have to go to Scotland-yard for his servant any more than a gentleman for his coachman, especially as it took no responsibility off his shoulders, but at the same time prevented his engaging men whose character he inquired into? He had had more than one interview with the late Sir Richard Mayne on this subject, and recollected

on one occasion, when Captain Fishbourne and Mr. Owen, of the Poor-law Board, were also present, Sir Richard said, as showing the bad character of cab-drivers,—"for instance, Mr. Smith, if we have a bad policeman who has to leave the force, he has no difficulty in getting a cab licence." His reply was, that was just what he always contended; it was not first a cabman and then a bad man; but first a bad man and then the police authorised him to become a cabman. It would hardly be believed, but he had in his hand a list which would prove the fact, that every day, before a cabman set his foot on the cab, he might render himself liable to fines to the amount of £107, and all this after he had been licensed. Surely with such safeguards for his good conduct, the licence could be dispensed with. The badge he considered was no protection to the public, and certainly no advantage to the cabman, although when it was first introduced *Punch* remarked that every cabman would now be sure of a "plate of Whittle's." Very seldom was a cabman summoned by the number of his badge; indeed Alderman Salomons acknowledged to him that he did not remember an instance, and on more than one occasion where it had been done, he had seen the man let off because the policeman found he had summoned the wrong man. He would also abolish inspection; the present system was useless. He had known two cabs rejected one day as unfit for public use, and passed the next day but one in the name of another owner, with a compliment on their excellent quality; and he had had a cab of his own break down empty, having been passed the previous day. Why should he submit his cab to inspection when he was just as much responsible if it broke down and injured anyone as he was before? The present object of the proprietor was, not to get the best cab he could, but to get his cab passed. With regard to lost property, he might mention that there was a penalty of £10 upon any cab-driver who neglected to take anything found in his cab to Scotland-yard or a police-station within twenty-four hours, unless previously owned. He himself always took everything to the station, and the second thing he happened to take under the new Act was a doctor's four-ounce bottle; the inspector seemed surprised at his bringing it, but he told him he had no alternative under the Act, and he therefore claimed one shilling "for his honesty." One of his men on one occasion found £5 10s. in money, which was taken to the police-station, and thence forwarded to Scotland-yard. The owner, on applying for it, was informed that he would have to leave 3s. 6d. in the pound for the cabman, as a reward for his honesty, which was then the regulation in the case of gold and silver, but the driver only received 2s., and he (Mr. Smith) wondered what became of the difference. He thought articles unclaimed within a certain time ought to be given up to the cabman; and he believed the authorities would like it to be so, for the sale of the articles under the present system hardly paid the expenses; the Jew dealers got all the benefit. With regard to luggage lost from cabs, he thought the proprietor should only be liable to a certain amount, unless the owner before starting stated the value, and paid a fixed sum for safe transit.

Mr. PEARCE said he had no doubt the licensing system had been adopted with a view to obtaining a better class of drivers, but it had plainly failed to do so. He firmly believed that there would be a superior class of men found driving cabs if the license were abolished, and for this reason: A number of men got licenses now whom no respectable man would associate with, and whom no one would employ if they had the opportunity of getting any one else. He could put his hand on a man who had recently been imprisoned for eighteen months who was now driving a cab; but these men knew that cab-owners must send out their vehicles in their charge or else have them at home, and the proprietor, knowing he cannot take the first respectable man that offers, was obliged to take those who apply, because they were licensed. There

was a remarkable absurdity connected with the renewing of licenses. If a gentleman had had a servant a year, and was satisfied with him, he did not go and ask somebody else what the man's character was; but this was practically what was done by the government in the case of the cab driver. A policeman went to the address given to see if he lived there, and if he did not happen to be at home, was not satisfied with the wife's assurance, but the man himself was required to go to the police-station, in order to satisfy the authorities that he lived with his wife. The whole thing was a farce, for, at the same time that these precautions were taken, he knew numbers of men who were driving under fictitious licenses.

The CHAIRMAN said he hoped the meeting would agree with him in thinking that they had pretty well discussed the subject, and that its division into different sections had been a prudent course. He was gratified at finding so good and business-like an attendance, and hoped their proceedings would not end in mere words. Since Mr. Fitzroy's bill was carried, he believed there had been an increase in the goodwill felt by the public towards the cab-drivers; and inasmuch as the questions that had been discussed very nearly affected the comfort and convenience of the whole public, he was quite convinced that the Society of Arts had done well in bringing the matter forward. He did not know whether the trade had had any consultation with the present Commissioner of Police, or whether they would think it wise to do so, but from his knowledge of Colonel Henderson, he felt sure he would not be averse to hearing the opinions of those engaged in the business upon any practical points which they wished to bring before him, especially as he was now engaged in assisting in the preparation of an Act of Parliament for improving the cab regulations. It must be understood that he (the Chairman) had no authority from Col. Henderson to say this; but this was his opinion, and if it was considered desirable that some one connected with the Society of Arts should accompany a deputation for the purpose of explaining matters, he had no doubt it could be arranged, and he would himself be happy to be of any use in the matter. He was quite sure that no one was more desirous of doing full justice to everybody than the present Home Secretary, Mr. Bruce; and if it were considered necessary or desirable he also might perhaps grant them an interview.

Mr. HOWARD thanked the Chairman very heartily for his kindness, and it was proposed that a meeting of the trade should be held in the course of the week, at which, if thought desirable, a deputation should be appointed, and a course of action determined on.

Mr. CROCKER moved a cordial vote of thanks to the Chairman for his great patience and ability in presiding over such a long meeting, and to the Society of Arts for affording them the opportunity for so important and practical a discussion.

Mr. PEARCE seconded the resolution, which was carried unanimously.

The CHAIRMAN said it had afforded him great pleasure to be of any assistance in this matter. He was convinced that the less government interference there was with cabs the better, and he believed the public would ere long be of the same opinion.

AWARD OF WHITWORTH SCHOLARSHIPS, PRACTICAL EXAMINATION, &c.

1. The Lords of the Committee of Privy Council on Education have, in concert with Mr. Whitworth, made the following rules for awarding the Whitworth Scholarships this year, and for holding the examinations in handicrafts, and in the practical use of tools.

2. It was decided that the scholarships were to be awarded according to the results of the examination of the Science and Art Department in the following subjects, as defined in the Science Directory:—1. Elementary mathematics; 2. Higher mathematics; 3. Theoretical

mechanics; 4. Applied mechanics; 5. Practical, plane, and solid geometry; 6. Machine construction and drawing; 7. Acoustics, light, and heat; 8. Magnetism and electricity; 9. Inorganic chemistry; 10. Metallurgy; and according to the skill shown by the competitors in a special examination in the following handicrafts—1. Smiths' work; 2. Turning; 3. Filing and fitting; 4. Pattern making and moulding; or in the use of the following classes of tools—the axe, the saw, and plane, the hammer and chisel, the file, or the forge.

3. Mr. Whitworth desired that the number of marks obtainable in the theoretical subjects, and those obtainable by the most skilled workman, should be about equal. And it was decided that no candidate should be eligible to obtain a scholarship who had not shown a satisfactory knowledge of elementary mathematics, elementary mechanics, and practical plane and solid geometry, passed in freehand drawing, and proved his power to use one at least of the before-mentioned classes of tools.

4. The relative position of candidates, as regards the theoretical subjects, will be determined by affixing the same scale of marks to the several grades of success as is laid down for the competition for Royal exhibitions, viz. :—

	Marks.
For a 3rd class in elementary stage . . .	1
2nd " " " . . .	3
1st " " " . . .	5
2nd class in advanced stage . . .	5
If previously successful in elementary stage . . .	7
1st class in advanced stage . . .	7
If previously successful in elementary stage . . .	9

And 5, 4, 3, 2, and 1 marks in addition, to the first five candidates in the advanced stage, if they obtain more than 90 per cent. of marks.

	Marks.
For honours—2nd class . . .	14
1st class. . .	17

"Good" in freehand drawing will count as 1 mark, and "excellent" as 3 marks.

5. The "satisfactory knowledge" required for passing in the subjects mentioned in section 3 will be taken to mean the obtaining of a first-class in the elementary stage of elementary mathematics, a second class in the elementary stage of theoretical or applied mechanics, a second class in the elementary stage of practical plane and solid geometry, and a "good" in freehand drawing.

6. The results of the examination in all the theoretical subjects will be published about the middle of June. It will then be possible to define, within comparatively narrow limits, the candidates amongst whom the competition will really lie. These will be directed to hold themselves in readiness to undergo the practical examination, which will be conducted at a certain number of centres by qualified persons.

7. The practical examination is of two kinds. There is the examination of the handicraftsman or skilled artisan, and there is the qualifying examination in the use of certain tools.

8. The examiners will decide on the number of marks to be awarded, and the position of the skilled artisans, by the rate of wages, &c., which they have been receiving (as vouched by the certificates of their employers), by work specially executed for the occasion, or by an inspection of work upon which they may have been employed.

9. The examination in the use of tools will be the performance of one or more of the following pieces of work:—

The Axe.

- To square up a block of wood a foot long and six inches in diameter.
- To make a spoke for a cart wheel.
- To be able to shaft an axe.
- To cut out wheel spokes ready for fitting into nave.

The Saw and Plane.

- a. To saw from a plank two pieces of timber three feet long and three inches square and plane them up true.
- b. To make a box 18 in. long \times 9 in. wide \times 9 in. deep, planed up true, and the joints dovetailed together.
- c. To saw out and plane up two parallel strips 2 ft. \times 2 in. \times $\frac{3}{8}$ in.

The Hammer and Chisel.

- a. To chip a piece of cast-iron six inches square over on one of its surfaces, ready for filing.
- b. To cut out of sheet iron (any gauge) a figure or letter of any size from 1 in. to 6 in.

The File.

- a. To file two sides of a cast-iron inch cube as flat as possible with a Stubbs' twelve-inch second cut file, the stroke of the file not being less than nine inches.
- b. A wrought-iron hexagonal nut, $\frac{1}{2}$ in. or 1 in., to be filed up true.
- c. To file up two parallel strips, iron or steel.
- d. To file up pocket square as true as possible.

The Forge.

- a. To weld or join together two pieces of iron three quarters of an inch square.
- b. To make a pair of smith's tongs.
- c. To make the head of a hammer.
- d. To make a pick.
- e. To make 2 ft. $\frac{3}{4}$ in. chain with hook and ring.
- f. To make a horse-shoe complete.
- g. To cut off and draw out chipping chisel or drill, and afterwards harden.
- h. To make a pair of small callipers.
- i. To make a pocket square.

10. A competitor is not restricted to one only of the handicrafts, nor to the use of one class of tools, but he may show his skill in two or more. His position and the number of marks to be awarded to him will be determined by his general skilfulness as a workman. A skilled mechanic will thus be enabled to obtain credit and improve his position, by showing his power of using those classes of tools not properly belonging to his own handicraft; and the ordinary student may, in like manner, instead of simply qualifying in the use of a certain class of tools, show his skill in one of the handicrafts mentioned.

11. To those who merely qualify in the use of tools, a certain proportion of the marks obtainable for practical workmanship will be given, according to their relative skill. These marks will count towards the general result.

12. The travelling expenses of poor students—second-class railway fare with a personal allowance of 10s. per diem—will be allowed, to enable them to attend at the places where the practical examinations are to be held.

South Kensington, 29th May, 1869.

Manufactures.

LIQUID FUEL.—Creosote, oils, and other inflammable liquids of a kindred character, bid fair to effect a speedy and an important révolution in the supply of materials applicable to heating purposes. Mr. D. Dorsett has brought out a system by which not the creosote oil but its distilled vapour, which is more powerful, is made to do the work of coal in heating iron-plates to the heat necessary for bending them for ships' armour-plating and other similar purposes, where the advantages sought are a very high and at the same time so equal a temperature as that, while producing the required amount of ductility in the material to be operated upon, it shall not be deteriorated in its fibrous tenacity. For some two or three months Mr. Dorsett has been experimenting with his patent fuel in Woolwich Dockyard, and so satisfactorily to the Admiralty authorities, that they have instituted tests at Chatham, with a view to the preparation of the armour-plating of the *Sultan* armour-plated ship

now building in that dockyard. The advantages may thus be shortly summed up, as compared with coal:—A greatly-diminished cost and saving of time in producing the required heat of iron, as well as a saving of labour; an absence of refuse, and a surface altogether free from scale. As regards the effect of this new mode of heating upon the metal itself, one of the dockyard operatives declared, somewhat emphatically, that the commonest iron treated by it came out of the furnace as good as the best Low Moor. The apparatus is simple, and inexpensively applicable to existing coal-furnaces. It consists of a reservoir, from which the oil is pumped up as wanted into a receiver, where, by the application of heat, the vapour is generated, and this is passed through pipes into the furnace, and used as fuel in the ordinary way.

Commerce.

PUBLICANS AND GROCERS' WINE AND SPIRIT LICENCES.—The *Produce Markets Review* says:—"As the Chancellor of the Exchequer has been considering the general question of licences, the time is opportune for calling attention to the great inequality in the sums paid by publicans and by grocers for selling wines and spirits:—

Publicans' Licences to Sell on Draught, for Consumption on the Premises.

	£.	s.	d.
Spirits	11	0	6
Wine	2	4	1
Beer	3	6	1 $\frac{1}{2}$

Total £16 10 8 $\frac{1}{2}$

Grocers' Licences to Sell for Consumption off the Premises.

	£.	s.	d.
Spirits	13	13	0
Wine	10	10	0
Beer	4	8	2 $\frac{1}{2}$

Total £28 11 2 $\frac{1}{2}$

The grocer, it is true, can obtain a £3 3s. licence, but this will only allow him to sell less than a dozen at a time, a useless quantity if a man is to do anything like a trade. The grocers' licence ought clearly to be considerably below the publicans', as the latter sell for consumption on the premises, and are, besides, not hampered with the prohibition to sell less than a quart bottle of spirits, nor forced to keep their wines and spirits in different places. We can see no real reason why a grocer should pay a licence for selling bottles of wine any more than he does for selling bottles of pickles. The object of a publican's licence is, we presume, to give the authorities some power to check disorderly proceedings, but we cannot see why a bottled trade should require anything of the kind. At any rate it is clear that a grocer ought, in justice, to pay about half what a publican pays, instead of paying fifty per cent. more."

Publications Issued.

ACTUALITÉS SCIENTIFIQUES.—SCIENCE ANGLAIS SON BILAN AU MOIS D'AOUT, 1868.—REUNION A NORWICH DE L'ASSOCIATION BRITANNIQUE POUR L'AVANCEMENT DES SCIENCES. (Par M. L'Abbé Moigno, Paris, 1869.) This is a French version, by M. Abbé Moigno, Foreign Associate of the British Association, of the proceedings at Norwich, including the addresses of the president and vice-presidents; the papers read by Professors Huxley and Owen; an analysis of the communications made to the Association, and a report on the proceedings of the Archæological Congress, also held at Norwich, at the same time as the Association; all contained in a small

duodecimo volume of 236 pages. The Abbé Moigno has constituted himself the interpreter to his countrymen, of English scientific proceedings and publications. The volumes of this series include translations of Professor John Tyndall's essays on "Radiation;" Professor Hofmann's work on the "Cohesive Power of Atoms;" Mr. Huggins's "Spectrum Analysis of the Celestial Bodies." *Les Mondes*, of which the Abbé Moigno is editor, also gives great attention to English scientific progress.

LES INDUSTRIES AGRICOLES. By M. A. Ronna, engineer. 1 vol., 8vo., with seventy-five engravings, and eight plates (Paris). M. Ronna is known as one of the translators of Dr. Percy's "Metallurgy," and as the author of several works on agricultural chemistry. The new work treats of sugar-making, distillation, brewing, wine-making, the preservation of grain, flour and bread-making, preservation of food, oil manufacture, tanning and leather-dressing, paper making from wood pulp, and the various methods of preserving timber, &c.

Notes.

SOUTH KENSINGTON MUSEUM.—The Rev. Alexander Dyce has bequeathed to this museum his important dramatic library, with its unique editions of Shakespeare, and all his pictures, miniatures, antique rings, and other works of art, upon the condition that a suitable room is built to receive them.

FRENCH SCIENTIFIC AND NAVAL MISSIONS.—The French government sends a ship round the world once a year, for the completion of the instruction of the boys who have passed through the course of education in the Imperial Marine School of Brest. The Minister of Public Instruction has recently announced that his colleague, the Minister of Marine, has determined that in future two savants, a physicist and a naturalist, shall accompany the vessel. These gentlemen are to be selected by the Academy of Sciences, and to be furnished with instructions for scientific observation by that learned body. The Minister of Marine also announces that he has organised a special voyage round the world, the main object of which is the study of navigation by sailing ships, with a view to the improvement of the system; and as the vessel will touch at many ports, the minister notifies to the Academy that the voyage will supply the occasion of many important observations, to be made by scientific men appointed and instructed by the Academy.

THE RUSSIAN FLEET.—The following are the particulars of the Russian fleet, as given in the *Journal of St. Petersburg*, from the report of the Ministry of the Marine:—On the 1st of January, 1869, the fleet counted 230 steamers and 37 sailing vessels. The former consisted of the following armour-plated vessels:—4 frigates, 3 batteries, and 13 monitors. Non-plated vessels—6 ships of the line, 8 frigates, 18 corvettes, 7 clippers, 62 gun boats, 6 vessels called "vapeurs-frigates, 4 imperial yachts, 13 schooners, 22 transports, 48 dispatch boats, and 16 chaloupes. The sailing vessels consisted of 5 yachts, 4 schooners, 15 transports, and 13 chaloupes. Of these, 156 vessels were in the Baltic, 1 in the White Sea, 30 in the Caspian, 41 in the Black Sea, 31 on the Eastern coasts of Siberia, and 22 in the sea of Ural. There were, in addition, 4 plated frigates and a steam yacht on the stocks in the Baltic, and 2 gun-boats on the Siberian coast.

Correspondence.

PENSIONS TO SCHOOL TEACHERS.—SIR,—I have been much interested by the address of Mr. Edwin Chadwick, at the deputation to Earl de Grey, on the subject of pensions to aged school teachers, reported in the *Journal*

of the 21st May. Mr. Chadwick justly complains of "the disastrous experience, attested by school inspectors, of the wide-spread desertion to less discouraging conditions of the most valuable skilled elementary teachers, reductions of the numbers of pupil teachers, ruinous to the training colleges, a reduction of the quality of the teaching of the children of the wage-classes of the country." He chiefly ascribes this to the severance of the teacher from all direct relationship with the Committee of Council on Education, leaving him exclusively to make the best terms he can with the local school committee. This is not, I think, the only or even the chief cause of the distaste of the schoolmaster for the present condition of things, *i.e.*, the scheme laid down by the notorious Revised Code. I find that young men of spirit treat pretty freely with the committees, I dare say from a conviction that there is at present no danger of any glut in the teaching market, though the change has been most galling to the experienced masters, who have had to submit to the imposition of new terms. But if the present system is persevered in, one of the evils, the scanty supply of teachers, can easily be remedied, inasmuch as any intelligent book-keeper, "passing rich" on £50 or £60 a-year, has ample qualifications for giving all the instruction in the three R's now deemed by the highest educational authority in the State all that is necessary for the mental training of the poor man's child. It is this degradation of the duties of the primary teacher that has done more to alienate him from the occupation than anything else. Possibly, under the pre-Revised Code régime, there was too great a temptation to give disproportionate attention to the clever boys, and to base the reputation of the school on their attainments; but surely it was not necessary, in order to check this, to banish all such studies as exercise the faculties of the best scholars. If it is said—as it has been, with a plausible evasion of the real point at issue—that no department of instruction was really banished from the primary schools by the Revised Code, I reply, and the schoolmasters of England will do so also almost as one man, that to make the "three R's" the only subjects on which payments would be made, and the payment on each child so small, that a remunerative amount could only be obtained by a large aggregate mediocrity, practically compels the teacher to give all his energy to this work, to the exclusion of any of a higher order. If this only concerned the teacher and the parties through whose hands his income should pass, one might leave the matter to self-adjustment. But it is a national question just now of vital importance. The Endowed Schools Bill, now before Parliament, wisely contemplates the encouragement of presentations from the lowest schools to the endowed institutions, grammar schools, &c., from which again exhibitions should, with judicious liberality, be made to the colleges connected with the universities. Formerly the best of our primary schools would have been ready with boys to compete for such scholarships; now they are not worth the schoolmaster's consideration. We are stimulating technical instruction, by the aid of Whitworth and other scholarships; we are expending a large sum annually in subsidising science teaching—refusing to pay on any pupils but those of the wage-classes; and, with unaccountable perversity, we ignore the idea of giving any preparation for advanced knowledge in our primary schools, for the permissive clauses, recognising grammar, history, and geography, are virtually useless. Let a commission—a Society of Arts Committee would do the work admirably—undertake the simple task of laying down a course of primary instruction for the children of the wage-classes, having in view the exercise of their powers of observation, and their reasoning faculties—the latter especially—through such obvious phenomena and their laws as any intelligent child can understand, while even the rudimentary instruction should, wherever practicable, keep principles in view; this would give us something tangible to claim of government. In any such committee I should like to

see two experienced certified schoolmasters. I should have no difficulty in naming men whose judgment would be as trustworthy as their knowledge of the average capabilities of boys up to fourteen years of age, and the motives by which they are chiefly actuated. I think also that it is most desirable to have some scheme of secondary schools or classes open to boys after leaving the primary schools, to carry forward the culture, just acquiring some vigour, at the period a lad is entering on an apprenticeship. This must be done in the evening, and is more or less considered in our Mechanics and similar Institutions, but on no definite plan, and here, I believe, some moderate assistance by government, to encourage a good co-ordination of studies, rather than detached subjects, would, in the long run, do a great deal to promote real practical education. But the discussion of the latter topic in detail would extend this to an unreasonable length.—I am, &c., W. H. J. TRACE.

Pendleton, May 29th, 1869.

VENTILATION OF SEWERS.—SIR,—Following in the wake of so able a correspondent as Mr. Bridges Adams, I feel some hesitation in addressing you, but, with all due deference to the wisdom contained in his letter, I must dissent from the practicability (within the next century or so) of his proposition of daily collecting the sewage. I doubt not that all your readers, in common with myself, experience a feeling, when paying sewers' rates, which we may reasonably suppose would be shared by a man rewarding a burglar who had carried off the contents of his cash-box. Plainly speaking, we pay the Sewage Commissioners instead of (drainage being properly collected and utilised) their paying us; but, since in the face of the main drainage, we can scarcely live in the hope that sewers will, for a long time, be employed in their proper capacity of carrying off storm waters only, and since sewers being used as they are now, noisome gases must also be of necessity a resultant, it becomes us not to prevent the formation of such gases, but rather to prevent their escape into our dwellings and streets, thereby avoiding the detrimental effects arising from such escape. To produce this desirable object, we have only to turn the almost general up-draught from our traps and gullies into a steady down-draught into them, which could easily be effected by a suitable system of exhaust, and the gases now so ruinous to health and so obnoxious to our nasal organisation (especially on Sunday night, when the authorities seem to consider it profanation of the Sabbath to study the public health), might be, if possible, utilised, but certainly destroyed. I am perfectly aware that the merit of this project does not consist in its novelty, but I feel that it cannot be too frequently brought under notice.—I am, &c., W. F. C.

MEETINGS FOR THE ENSUING WEEK.

- MON.**.....R. Geographical, 84. Mr. St. Vincent Erskine, "Exploration of the Lower Course of the Limpopo River."
Social Science Assoc., 8. Mr. Thomas Briggs, "On the Relations of the British Colonies to the Mother-Country, considered from an Agricultural and Commercial point of view."
TUES....Statistical, 8. Mr. T. A. Welton, "On the Statistics of the English Census."
Anthropological, 8.
WED....Meteorological, 7. Annual Meeting.
THUR....Royal, 84.
Antiquaries, 84.
Linnean, 8. Dr. E. Bureau, "On Plants of the order *Bignoniaceae*, collected by M. Correa de Mello in Brazil."
Zoological, 4.
Chemical, 8.
Numismatic, 7. Annual Meeting.
Philosophical Club, 6.
Society of Fine Arts, 8. Lecture by Mr. W. Cave Thomas.
FRI......Society of Arts, 8. Conference on "Cotton Cultivation and Supply."
Philological, 84.
R. United Service Inst., 84. 1. Rear-Adml. Sir John C. D. Hay, "On the Launch of H.M.S. *Northumberland*." 2. Lieut.-Col. Baillie, "On the Application of Photography to Military Reconnaissance."

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

Delivered on 14th May, 1869.

- Par.
Numb.
97. Bill—Bankruptcy (amended).
98. " Imprisonment for Debt (amended).
106. " Libel (amended).
104. (1.) Joint Stock Companies—General Summary.
180. Sligo County Election—Correspondence.
186. Lighthouses, &c.—Reports.
191. Sugar, &c.—Return.
204. Rule of the Road at Sea—Observations.
207. Greenwich Hospital—Correspondence.

Delivered on 15th May, 1869.

98. Bill—Imprisonment for Debt (amended) (corrected copy).
116. " Beerhouses, &c (amended).
121. " County Courts (Admiralty Jurisdiction Act, 1868) Amendment.
123. " Irish Church (as amended in Committee, and on Consideration, as amended).
125. " Sea Birds Preservation—Lords Amendments.
81. (iii.) Railway and Canal Bills—Fourth Report.
154. New Palace of Westminster—Correspondence.
184. Salmon Fisheries (England and Wales)—Eighth Annual Report of Inspectors.
202. Army (Succession of Officers)—Correspondence.
209. Kitchen and Refreshment Rooms (House of Commons)—First Report.

Delivered on 18th May, 1869.

113. Bill—Courts of Justice (New Site).
119. " County Administration.
124. " Endowed Hospitals, &c. (Scotland) (as amended by the Select Committee).
127. " Titles of Religious Congregations Act Extension.
China (No. 4, 1869)—Correspondence.
China (No. 5, 1869)—Correspondence.
China (No. 6, 1869)—Correspondence.
China (No. 7, 1869)—Correspondence.
China (No. 8, 1869)—Correspondence.
China (No. 9, 1869)—Papers.

Delivered on 21st May, 1869.

109. Bill—Election Commissioners (Expenses).
114. " Pier and Harbour Orders Confirmation.
122. " Married Women's Property (amended).
124. " Endowed Hospitals, &c. (Scotland) (as amended by the Select Committee) (corrected copy).
131. " Petroleum.
China (No. 3, 1869)—Correspondence.
China (No. 10, 1869)—Further Correspondence.
Tornado (No. 2, 1869)—Correspondence.
Public General Acts—Chap. 8 to 13.

Delivered on 22nd May, 1869.

39. (1.) Army Estimates (Vote 21, revised).
177. East India (Communication)—Report.
179. Gun Cotton, &c.—Reports.
188. Life Assurance Companies—Return.
203. Statute Law Commission—Return.
210. Married Women's Property Bill—Report.
211. British Museum—Accounts.
215. Mr. Anketell—Resolutions, &c.
Public Petitions—Twenty-first Report.

Delivered on 26th May, 1869.

118. Bill—Diplomatic Salaries, &c.
197. Factory Acts Extension Act (1867) (Modifications)—Return.
208. Endowed Schools Bill—Report of the Select Committee.
212. Coals—Return.
213. Parliamentary Returns—Return.
214. Bank of England—Returns.

Delivered on 27th May, 1869.

117. Bill—Poor Relief (Ireland) Act (1862) Amendment.

Delivered on 28th May, 1869.

217. Malta—Despatches, &c.
218. New Zealand Loan—Extracts of Correspondence.

Delivered on 29th May, 1869.

77. Bill—Metropolitan Commons Act (1866) Amendment.
200. Hungerford-bridge and Wellington-st. Viaduct—First Report.
220. Crime (Ireland)—Return.

SESSION 1868.

344. (A XI.) Poor Rates and Pauperism—Return (A).

Delivered on 31st May, 1869.

132. Bill—Customs and Inland Revenue Duties (amended).
133. " Civil Offices (Pensions) (amended).
134. " Insolvent Debtors and Bankruptcy Repeal.
136. " Oxford University Statutes.
137. " Pier and Harbour Orders Confirmation (No. 2).
219. Imprisonment for Debt—Returns.

222. Rinderpest—Return.
 224. Police (Scotland)—Eleventh Report.
 230. Exchequer Bonds—Account.
 New Law Courts—Block Plans by G. E. Street, A.R.A.

Delivered on 1st June, 1869.

138. Bill—Companies Clauses Act (1863) Amendment.

Delivered on 2nd June, 1869.

46. (III.) Trade and Navigation Accounts (30th April, 1869).
 167. (I.) Trade Accounts (Foreign Countries) (Belgium, Holland, and United States).
 225. Railways (Facing Points)—Rules.
 226. Naval Savings Banks—Account.
 227. Postal Communication (Australia)—Correspondence.
 North America (No. 1, 1869)—Correspondence respecting the Negotiations on the Questions of the *Alabama* and British Claims, &c.

Delivered on 3rd June, 1869.

100. Bill—Valuation of Property (Metropolis) (as amended).
 130. „ Salmon Fisheries Law Amendment.
 135. „ County Coroners (amended).
 139. „ Election Commissioners (Expenses) (as amended).
 140. „ Joint-Stock Companies Arrangement.
 141. „ Beerhouses, &c. (as amended in Committee, and on Consideration, as amended).
 221. Reformatory and Industrial Schools—Return.
 232. Strand Union—Correspondence.

Delivered on 4th June, 1869.

156. County Expenditure—Return (corrected copy).
 238. New Courts of Justice—Estimate of Advances, &c.
 Turkey—Protocol relative to the Admission of British Subjects to the right of holding Real Property.

Patents.

From Commissioners of Patents' Journal, June 4.

GRANTS OF PROVISIONAL PROTECTION.

- Agricultural machines, &c.—1578—C. J. Foster.
 Boat-detaching apparatus—1567—W. R. Lake.
 Boots and shoes, apparatus for cleaning—1624—G. H. Ellis.
 Brooms and brushes—1674—J. Platt.
 Brushes, machinery for manufacturing—1597—E. T. Hughes.
 Carriage wheels—1608—A. McNeile and J. Slater.
 Castors—1559—G. Perkin.
 Cocks, taps, and valves—1517—J. Norton.
 Coffee mills—1565—H. E. Newton.
 Driving bands, uniting the ends of—1604—J. Trotman.
 Driving bands, &c., clip for uniting the ends of—1592—W. Furness.
 Eggs, apparatus for facilitating the opening of—1576—A. M. Clark.
 Ejector condensers, &c.—1599—A. Barclay.
 Electrical apparatus—1627—E. G. Bartholomew.
 Felting cloth, &c.—1545—W. Mitchell.
 Fire-arms, breech-loading—1448—A. Henry.
 Fire-arms, &c., breech-loading—1547—G. V. Fosbery.
 Fire grates, ashpans for—1551—J. Langham.
 Gelatine, &c., obtaining—1539—W. R. Lake.
 Glass houses for horticultural purposes—1622—J. Cranston.
 Glass, &c., tools for cutting—1612—M. Benson.
 Gun barrels, &c.—1626—F. H. Lloyd.
 Hats—1610—R. Wheble.
 Horse-shoe nails, &c.—1585—E. T. Hughes.
 Hydraulic motive-power, obtaining and applying—1609—L. Roman.
 Ice-houses, &c.—1596—W. A. Gilbee.
 Iron and steel—1582—H. R. Lumley.
 Iron, machinery for casting—1586—G. T. Bousfield.
 Lock spindles and door knobs—1563—M. Jarvis and E. Millward.
 Locks—1623—J. Bridges.
 Looms—1580—J. Hudson and C. Catlow.
 Mathematical instruments—1605—W. Jones and T. Sheffield.
 Metal, &c., shearing, punching, &c.—1577—W. R. Lake.
 Metallic articles, grinding—1593—W. Mitchell.
 Motive-power, obtaining—1606—F. T. Blake.
 Motive-power, obtaining—1621—C. Hanson and J. Bottomley.
 Mowing apparatus—1513—T. Norris.
 Musical boxes, albums, &c.—1425—R. F. Hoppe.
 Needles, wrappers for—1589—S. Thomas, jun.
 Ores, &c., calcining and smelting—1575—C. W. Siemens.
 Organs—1571—E. H. Fulbrook.
 Paint—1243—A. Borgnet.
 Pianofortes—1619—C. F. Chew.
 Piers, &c., foundations for—1543—J. E. Dowson, jun., & A. Dowson.
 Pneumatic sewage system—1352—C. T. Liernur.
 Pottery, &c.—1549—W. McAdam.
 Railway carriages, &c., apparatus for receiving and discharging cigar and tobacco ashes in—1611—R. Schomburg.
 Railway engines, &c., couplings for—1584—J. Lockwood.
 Railway rails, fishes for fishing—1625—R. P. Williams.
 Railway trains, communication in—1561—J. Reid.
 Railways, connecting and securing together the rails of—1581—W. Morris.

- Rolling mills, rolls for—1602—J. Dick.
 Sash pulleys—1588—M. Tildesley.
 Screw bolts and nuts—1613—W. Palliser.
 Screw bolts, machine for nutting—1615—T. Vaughan & E. Wattecu.
 Ships' compasses—1587—J. H. Davis.
 Spinning and doubling machinery—1541—P. McGregor.
 Steam engine governors—1614—H. D. McMaster and A. Dale.
 Steam-engine governors, &c.—1598—G. Salt and W. Ingils.
 Steam motors—1596—M. H. de Gossbriand.
 Telegraphic instruments—1600—J. Brittain.
 Tunnelling machinery, &c.—1618—J. D. Brunton.
 Turbine-wheels, reacting—1594—B. F. Weatherdon.
 Velocipedes—1439—T. Dunn.
 Velocipedes—1590—W. H. Bliss.
 Velocipedes—1601—R. Richardson.
 Velocipedes—1607—G. H. Hoare.
 Vessels, propelling and manœuvring—1555—A. L. McGavin.
 Window blinds, fittings for—1553—J. Bowman.
 Window shutters—1570—S. Jackson.
 Wood, &c., producing imitations of and substitutes for—1603—J. H. Johnson.

INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

- Bolts and nuts, machinery for manufacturing—1647—W. R. Lake.
 Peat, &c., machinery for manufacturing—1630—A. Edlmann.
 Vehicles, &c., mechanism for propelling and guiding—1682—W. R. Lake.

PATENTS SEALED.

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|-----------------------|----------------------------------|
| 3700. E. Francillon. | 3742. J. Kirk and J. Kirk, jun. |
| 3703. D. Thomson. | 3746. S. S. Anderson. |
| 3705. H. Denton. | 3754. W. Griffiths. |
| 3706. E. K. Dutton. | 3758. A. Matthiessen. |
| 3710. J. Holmes. | 3765. W. Dawes & E. A. Ramsden. |
| 3712. D. H. Paterson. | 3766. J. Pickles, E. Ramsbottom, |
| 3719. J. Ridley. | S. Haggas, S. Foulds, J. |
| 3722. W. R. Lake. | Shackleton, & W. Berry. |
| 3727. C. Farrar. | 3768. T. Holder and G. Dover. |
| 3728. A. Mackie. | 3775. J. Millward. |
| 3734. R. B. Roden. | 3780. Z. Poirier. |
| 3735. T. Speir. | 3828. A. M. Clark. |
| 3736. T. Speir. | 3879. R. Wilson. |
| 3737. T. Lancaster. | 3917. B. W. Maughan. |

From Commissioners of Patents' Journal, June 8.

PATENTS SEALED.

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| 3747. J. T. Parlour. | 3987. W. E. Newton. |
| 3755. J. Norman. | 6. T. Green. |
| 3764. J. F. Bentley. | 7. T. Green, W. Burrows, and |
| 3769. H. Carter & G. H. Edwards. | R. Turner. |
| 3787. G. A. C. Bremme. | 9. F. Perry. |
| 3808. W. Bywater. | 10. M. Henry. |
| 3813. M. Brown-Westhead and | 97. S. Jellyman. |
| R. Smith. | 128. A. Sehet. |
| 3821. W. N. Nicholson. | 188. F. Lipscombe. |
| 3838. F. Robert-Theurer. | 236. C. L. Wood and J. Hookley. |
| 3848. J. Quick, junior, and J. | 326. J. G. Willans. |
| Sampson. | 632. J. G. Willans. |
| 3854. W. F. Thomas. | 670. W. E. Gedge. |
| 3912. A. Sezille. | 823. J. C. Ramsden. |
| 3934. C. D. Abel. | 899. C. B. Parkinson, A. and J. |
| 3952. C. D. Abel. | Metcalf, & W. H. Heald. |
| 3986. H. E. Newton. | 1117. J. Kirk. |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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| 1522. J. H. Johnson. | 1736. W. Clark. |
| 1570. A. Grivel, jun. | 1881. C. H. Murray. |
| 1535. S. Turton. | 1726. C. E. Brooman. |
| 1539. A. B. Brown. | 1560. W. Lawrence. |
| 1548. A. Moncrieff. | 1567. H. Greaves. |
| 1588. D. Cochrane. | 1582. H. J. Griswold. |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

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|----------------------------------|----------------------|
| 1655. J. King and J. Partington. | 1684. G. B. Toselli. |
| 1663. J. Whitworth. | |

Registered Designs.

- 5027—May 19—A scarf fastener—H. Tagg, 70, Hatton-garden, E.C.
 5028—May 21—A combined letter-balance and calendar—C. Wise, 30, King Edward-place, Birmingham.
 6029—June 4—The Staplehurst wrought-iron garden-roller barrow—T. F. Descon, The Limes, Staplehurst, Kent.